January / March 2023

OZDIVER

AUSTRALIA'S PREMIER DIVE MAGAZINE

MEXICO

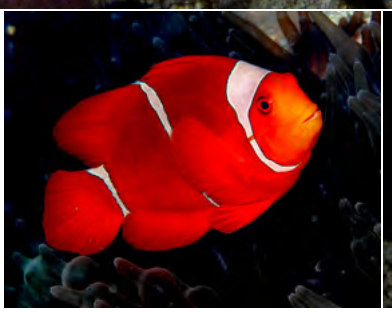
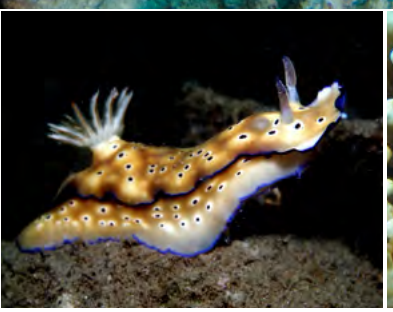
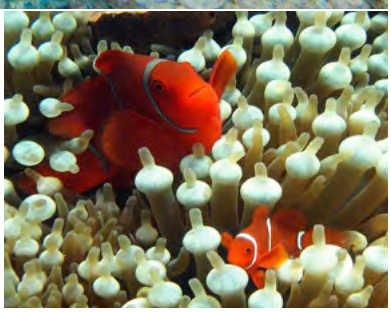
NITROGEN NARCOSIS

MANTA RAYS

WRECKS, CAVERNS & BULL SHARKS

SALEM EXPRESS

MALDIVES

January / March 2023 Edition

Editor's Deco

Every edition the magazine is doing better and better, it has a huge amount of readers from all over the world, but mostly from Australia.

As the magazine is available online at www.ozdiver.com.au and through apps for both Apple and Android devices, it is really easy for readers to access: now you can read it anywhere!

Every edition the magazine is full of interesting stories and articles for the diving community of Australia and for divers all over the world. This edition is once more full of articles for everyone, from the beginner diver to the more advanced.

If you want to publish your articles or photos in OZDiver magazine do not hesitate to contact me.
I hope that you enjoy this edition of OZDiver.

Editor in Chief & Publisher

Johan Boshoff

But seek first the kingdom of God and His righteousness and...

OZ DIVER

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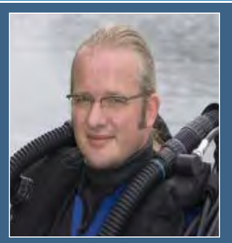
Andre Crone


Johan van Zyl

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Dray van Beeck

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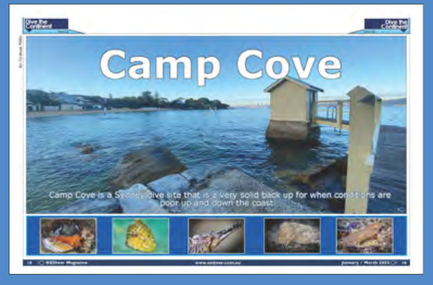

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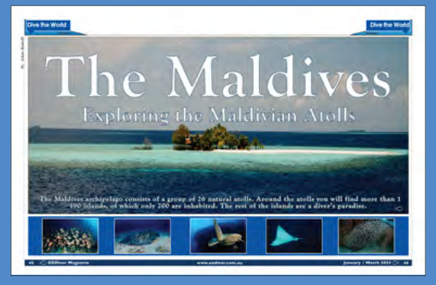

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When all else fails start swimming to the Bright Light.

Photos: Johan Boshoff

Concerned Cave Diver

About 8 years ago I was an advanced Nitrox diver. I was qualified to dive up to 50 meters and thought that diving was easy and what could go wrong?

So I heard about a new cave system and I had to dive this dive site. When arriving at the hole we heard that it was 40 meters deep and that there was a cave that goes down to 60 meters.

This was not too bad. So we kitted up and went down. I had a 15-liter cylinder and a back inflation BC.

At 40 meters we saw the entrance of the cave. The entrance was big and dark and we decided that a torch would be needed to go into this cave.

So on the next dive I took my torch. As we got to the entrance I switched on my torch and realised that I needed a bigger one, but I was with an experience diver and decided to go in. As I was swimming I realized that I was going deeper in depth but not into the cave. I had the opening at my back and time and again looked over my shoulder to make sure that I could see the exit.

Without any cave experience I had everything under control.

So I just kept on swimming and concentrated on this little beam of light in my hand. And with my friend with me, “Mr Nitrogen Narcosis”, I was on top of the world or almost 75 meters in a cave.

Then at 60 meters I came to a dead end, looking over my shoulder there was no light and the entrance of the cave was gone. Now it was me, my buddy and “Mr Nitrogen Narcosis” at 60 meters, 75 meters in a cave in total darkness with one flash light that looked like a match.

We had to find the exit or we would have stayed there for a very long time. We had 75 bar of air left in our cylinders.

The only thing that I could do was to get the cave wall on my left hand side, start swimming and breathe slowly. After a couple of minutes I saw a light. Was this the light at the end of the tunnel or the cave? But it was 75 meters from me and I had 55 bar of air left. My buddy was on 60 bars.

As we started getting shallower, “Mr Nitrogen Narcosis” left us and stayed behind. And we knew that we were in big trouble.

When we got out of the cave we were still 40 meters deep and had a Deco time of 23 minutes. I had 35 bars left. That works out to almost a bar a minute. At that stage it felt like a cricket game, need 40 runs off 40 balls but the price is to live one more day. So we started ascending.

I got out with no air in my cylinder to inflate my BC. I decided to do the last 4 minutes of my deco stop on the surface where there was air to breathe.

Luckily I had oxygen on the surface. I got on it immediately and was sitting and waiting for the bends, but nothing happened.

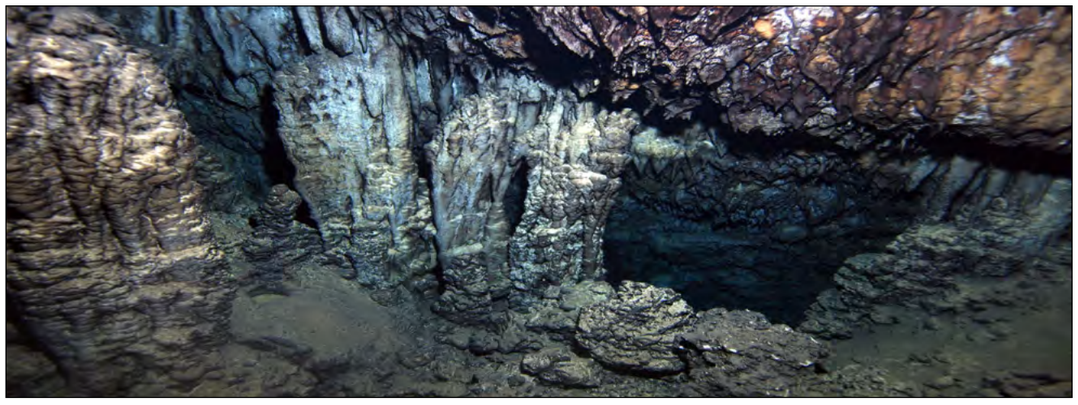
Like the road sign says “Speed Kills” . Take your time to get there, get the experience and the qualification and come back safely.

Now I am a qualified cave diver and thinking back on this close call, I was MAD to do this dive without the necessary training.

Lessons to be learned

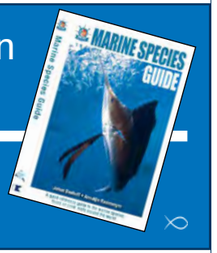
- Dive your qualification
- Know what you can do with your qualification
- Get the right equipment
- Make sure you know the dive site
- You can’t breathe water
- You can’t swim through rock

When all else fails start swimming to the bright light



WIN

Send your letter to us and win a Marine Life Species Guide



Here is a chance to be heard! If you have anything that you would like to share with OZDiver Magazine and other divers, send an email to Log Book at info@ozdiver.com.au. Remember that letters have more impact when they are short and sweet. We have the right to edit and shorten letters. In every issue, the winning letter will receive a Marine Life Species Guide.

OZ NEWS

SSI Releases it's Highly Anticipated Kid's Program - SSI Explorers

SSI is excited to announce the release of the SSI Explorers Program where kids aged 6-11 years old can get a taste of the many ways to explore the aquatic world around them. This exciting program makes diving for kids stress-free, guiding them in engaging underwater adventures where they can scuba dive, act like a real mermaid, and go underwater on a single breath with freediving. SSI has invested much time and energy into re-vamping this child-cantered experience program.

Formerly known as Scuba Rangers, the new SSI Explorers Program is today's most extensive aquatic experience program for kids in the dive industry. Children who have not yet reached the minimum age for scuba diving will not only gain a solid foundation in ocean conservation, but they will have the opportunity to experience four main aquatic adventures and many specialties.

Your young aquatic explorer will join Emma and Nico on exciting underwater adventures with their marine friends, Star the starfish, Shelly the sea turtle, and Spike the shark. The comprehensive children's manual is very engaging, with colourful cartoon drawings and authentic ocean images for this young audience. Emma and Nico guide children throughout the manual's educational content in a fun and engaging way, using Spike as their equipment expert and Shelly as the ocean environment advocate.

The SSI Explorers materials start by introducing children to the importance of protecting and preserving our oceans by becoming a Blue Oceans Explorer. After learning why our oceans are important, about the world's five oceans, and what they can do to help protect our oceans, students earn the SSI Blue Oceans Explorer recognition rating. They can then move on to learn all there is to know about snorkel equipment and snorkeling in a confined water environment to earn their Snorkel Explorer rating.

After completing these two initial experiences, SSI Explorers can choose from one of three aquatic adventures and either become a Scuba Explorer, Mermaid Explorer, or Freediving Explorer. Better yet, they can continue on to earn all three ratings!

SSI Mermaid Explorers get to swim around like real mermaids while improving their

Dive the Continent
OZ News

swimming skills. SSI Freediving Explorers will go underwater and dive deeper by holding their breath longer in an encouraging, relaxed environment. Explorers who have not met the minimum age for scuba diving can try it out within the safety of a pool or confined water and become an SSI Scuba Explorer.

The fun doesn't stop there, however! SSI Explorers can go on even more underwater adventures to earn 22 different Specialty Explorer ratings. They can improve their explorer skills with exciting specialties like Underwater Model Explorer, Rescue Explorer, Shark Ecology Explorer, and Search & Rescue Explorer, just to name a few. Your child can earn the Specialty Explorer recognition rating by completing two Explorer specialties. When they complete four specialties, they will become Advanced Explorers, and after completing the Rescue Explorer specialty, they can become a Master Explorer. SSI Explorers will even be able to earn real C-Cards just like their parents to show off their hard-earned recognition ratings.

To look back on their explorer fun, SSI has included a logbook section toward the back of the colourfully engaging SSI Explorers manual. The Explorer Logbook is where students can record details of their underwater adventures as they work through these exciting experiences. Near the logbook, SSI has also included an area for the Explorer Instructor to place an SSI recognition sticker specific to each completed explorer activity. Children will be excited to work toward earning them all!

In addition to English, the SSI Explorers program will be available as a book or digitally in three languages: German, Spanish, and Italian, with more languages hopefully coming soon.

Training the next generation of ocean lovers and aquatic enthusiasts is very important to SSI and all SSI Training Centres and Pros. The SSI Explorers Program is an excellent way to promote ocean conservation and aquatic safety in our younger population and prepare them for future open water certification opportunities once they reach the minimum age for scuba diving.

Look for an SSI Explorers Program at an SSI Training Center near you.

Australian Government reviews travel advice for Solomon Islands

Honiara, Solomon Islands – The Australian Government has reviewed its advisory for travellers visiting the Solomon Islands and effective immediately, the travel advice level has been lowered to 'exercise normal safety precautions.'

Commenting on the development in Honiara, Australian High Commissioner to Solomon Islands, Dr Lachlan Strahan said with the destination offering so much untapped tourism potential, he hoped lowering the level of the travel advisory will encourage more Australians to enjoy what he described as "this remarkable country."

"I have visited all nine provinces, enjoying the amazing coral reefs, mountains, beaches, biodiversity, cultural diversity and history of Solomon Islands, " Dr Strahan said.

"With borders open, now is the time to continue to build up the tourism industry.

"Australia stands ready to support the sector, alongside the Solomon Islands Government and other development partners."

Tourism Solomon Acting CEO, Dagnal Dereveke said the news could not have come at a better time as the national tourism office begins ramping up its efforts to reclaim its share of the Australian market.

"This decision will have very positive impact in re-establishing visitor confidence in the Solomon Islands as a travel destination," Mr Dereveke said.

Prior to the outbreak of COVID-19, which saw the Solomon Islands closed off from the world for more than 800 days, Australian arrivals represented close on 45 percent of its overall annual international visitor intake.

The advisory, posted on the smartraveller.gov.au website states that following a review for the Solomon Islands, the travel advice level has been lowered and travellers can now exercise normal safety precautions.

However, all travellers intending to visit the destination will still be required to provide proof of full vaccination at check-in and on arrival into the country.

"This is more good news on top of more good news," Mr Dereveke said.

"We aren't wasting any time, pulling out all the stops to get our Solomon Islands tourism industry right back on track and in the forefront of travel agents' and visitors' minds as quickly as possible.

"We are very confident with effort, good marketing and profile rebuild we can get back to where we were before the pandemic in relatively short time, especially with the Australian summer school holidays fast approaching."

"Our primary focus is to regain those Australian numbers as quickly as possible.

"Solomon Islands is very good to go!"

Citizen Scientists Remove Ghost Net From High Priority Reef

For the first time, 11 of the Great Barrier Reef's most remote northerly reefs around Lizard Island have been surveyed by citizen scientists aboard a flotilla of volunteer vessels taking part in the third Great Reef Census, led by Citizens of the Great Barrier Reef.

One of the most northerly islands in the World Heritage-listed Great Barrier Reef, Lizard Island offers access to a wide area of the reef and some of the most remote coral outcrops, home to a richly diverse community of coral and marine species. The 15 reefs around the island include high priority reefs vital to scientists and reef managers, including the Crown-of-Thorns Starfish (COTs) Control Program.

A flotilla of 10 vessels including the resort's own resident fleet of luxury launches and dive boats, together with crews onboard sailing yachts, fishing charters and a superyacht in the region responded to the Census callout and departed Lizard Island's Anchor Bay to take part in the survey.

Included in the reefs surveyed for the first time during the expedition were MacGillivray Reef, Linnet Reef and Parke Reef, all high priority reefs for the COTs Control Program. In an important additional conservation outcome of the initiative, Citizens of the Great Barrier Reef and Lizard Island staff discovered and removed a 'ghost' net trapped at Parke Reef.

Ghost nets are extremely dangerous in the coral reef ecosystem, continuing to trap and constrain marine life if left undetected.

CITIZENS OF THE GREAT BARRIER REEF

Lizard Island
GREAT BARRIER REEF

Dive Schools / Operators / Organisers / Instructors

Do you have any interesting, newsworthy info to share with the dive industry? If so, we would like to invite you to send us your OZ News section for possible inclusion in the magazine (please note that inclusion is FREE of charge).

Here's what we need:
- Newsworthy stories (promotional material will not be accepted)
- Word limit: 100 words
- Text prepared in a Word document
- Accompanying high-resolution image(s) are welcome (please supply caption and image credit)

Please send to info@ozdiver.com.au

Solomon Is. Diving

Photo by Matt Smith

SOLOMON ISLANDS BORDERS ARE NOW OPEN!

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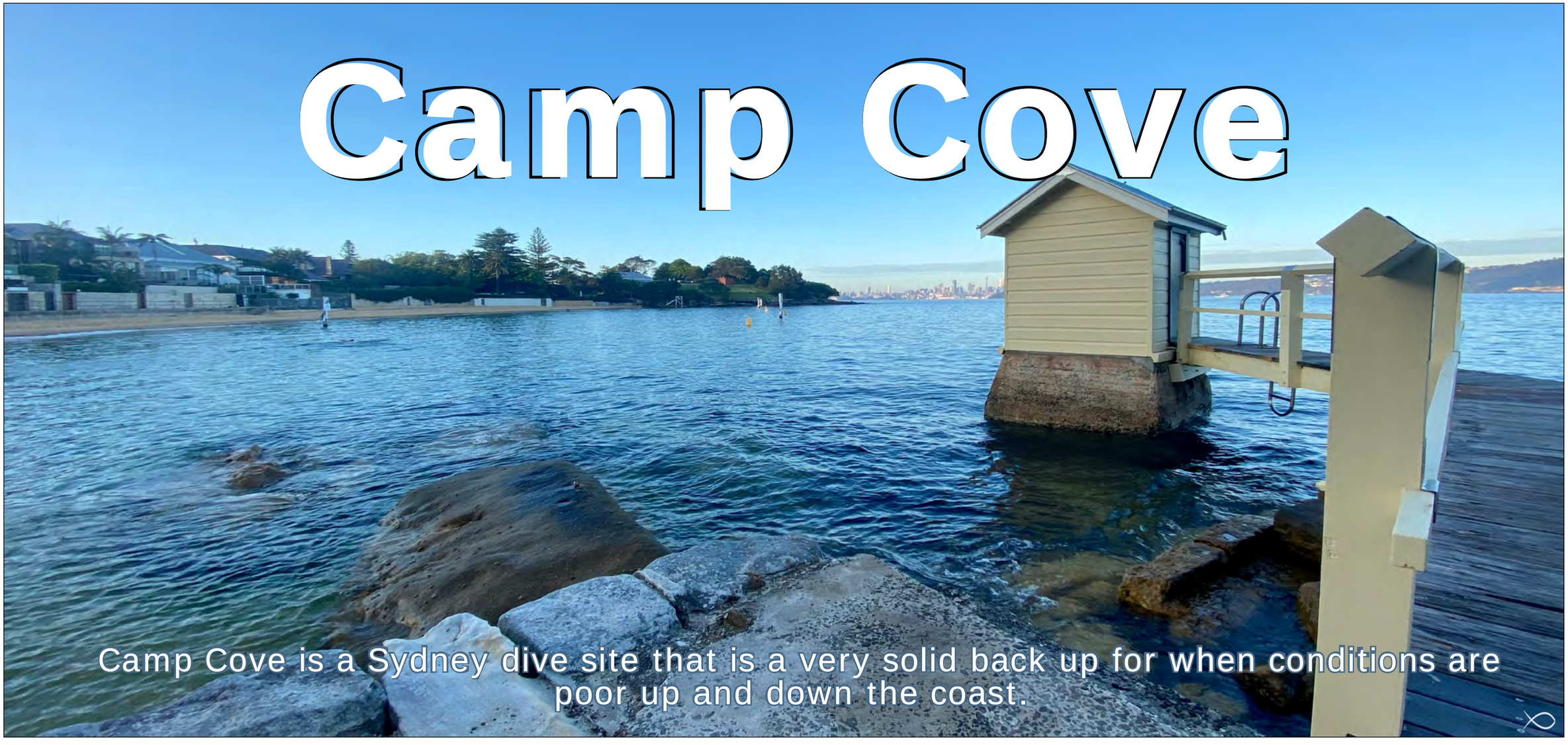
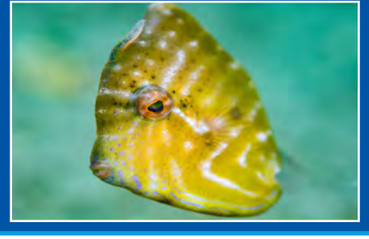
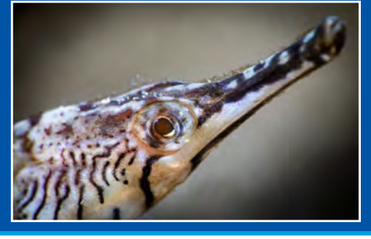
Dive the Continent
Dive OZ

By: Graham Willis

Camp Cove



Camp Cove is a Sydney dive site that is a very solid back up for when conditions are poor up and down the coast.

By: Graham Willis

It is near the entrance to Sydney Harbour on the southern Side, is very protected, has a small amount of free parking and a very benign entry and exit.

It is not just a backup but also a great site for beginners, night divers and those wanting a nice, chilled dive. Before leaping into the dive site itself…a bit of history.

Before you visit the site, you can check it out in our book 'Dive Spots of NSW' on page 177.
If you don't have your copy yet you can pick one up at your local dive shop or online at
https://ozdiver.com.au

A bit of background

Camp Cove was used by the local Gadigal people well before any Europeans arrived.

The beach allowed easy access to the water, the rocks some shelter and the freshwater spring behind the cove made it an ideal spot.

There are some rock engraving s and shell middens at the Northern end of te cove that confirm its habitation by the Gadigal people.

Well before the first Fleet arrived the Watsons Bay area provided abundant fish, shellfish and food for the local Aboriginal community in a sheltered environment.

Rock engravings in the area depict a range of marine creatures including whales and fish.

There is also a rock shelter at the

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By: Graham Willis

northern end of the Camp Cove Beach that shows evidence of habitation by the local Aboriginal people.

Camp Cove is probably the site of the first landfall in the Harbour by the First Fleet in 1788. Governor Phillip and the First Fleet rested for a night in Camp Cove before landing at Sydney Cove in 1788.

Easy access and calm seas saw the northern end of Camp Cove used as a base by the water police from 1840 onwards.

The wharf used by the water police forms the base of the current walkway out to the tidal gauge.

With the wreck of the Dunbar in 1857 a lifeboat shed was also built at the northern end of the beach.

At the southern end of Camp Cove, on the headland of Green, or Laing's Point, there is a marker for harbour navigation. This point marked the southern end of the cross-harbour boom net extending to Georges Head on the other side of the harbour.

This was erected during the second World War to keep out enemy shipping. Its biggest catch was one of the Japanese midget submarines which entered the harbour in 1942.

The Dive Site

The dive site itself is a shallow (maximum 7-8m), protected dive that is great for beginners not only because of the easy access and navigation but also because of the fish life in the area.

Parking is at a premium here and although there are around 35 car spots in a small car park on Cliff Street it fills up quickly… so be early.

There is also some very limited parking at Green/Laing's Point at the Southern end of the beach which has about 12 car spots.

There are some toilets just past

Dive the Continent
Dive OZ

By: Graham Willis

the beach kiosk and up the steps overlooking the cove as well as adjacent to the parking area at Green/ Laing's Point.

The beach is a lovely sandy beach in its own right so if you have a non-diving/snorkelling partner it is a really nice spot to hang out.

Kit up in the car park and walk down the to the beach past the Kiosk. Take your dive flag with you if you are heading out to the offshore reef.

In summer there is plenty of boat traffic in this area although there is a maritime exclusion zone some 25-30 metres out from the beach.

The boat traffic makes coming up on the reef a move of last resort…it really does get pretty busy.

There is a ban on spearfishing here…

By: Graham Willis

so you shouldn't have to keep an eye open for spearos.
It's an easy walk into the water and then you have a couple of choices. You can go out to the reef and then back to the shore or you can head along the shore keeping it to your right. It is a shallow dive and if you are good on your air, you can do both.

If going to the reef you can head at around 250o as though you are heading across the harbour and, after about 60-70 metres you will come across a reef that runs in a NE-SW direction (you can see it on Google MapsTM).

Head left, keeping the reef to your right. You will notice that reef has a series of gullies or cuts that run through it.

You can head down one of these, turn left along the outside of the reef and then left again to get back on the inside of the reef several times to make this a more interesting dive.

The fish life tends to be I those gullies rather than on top of the reef.

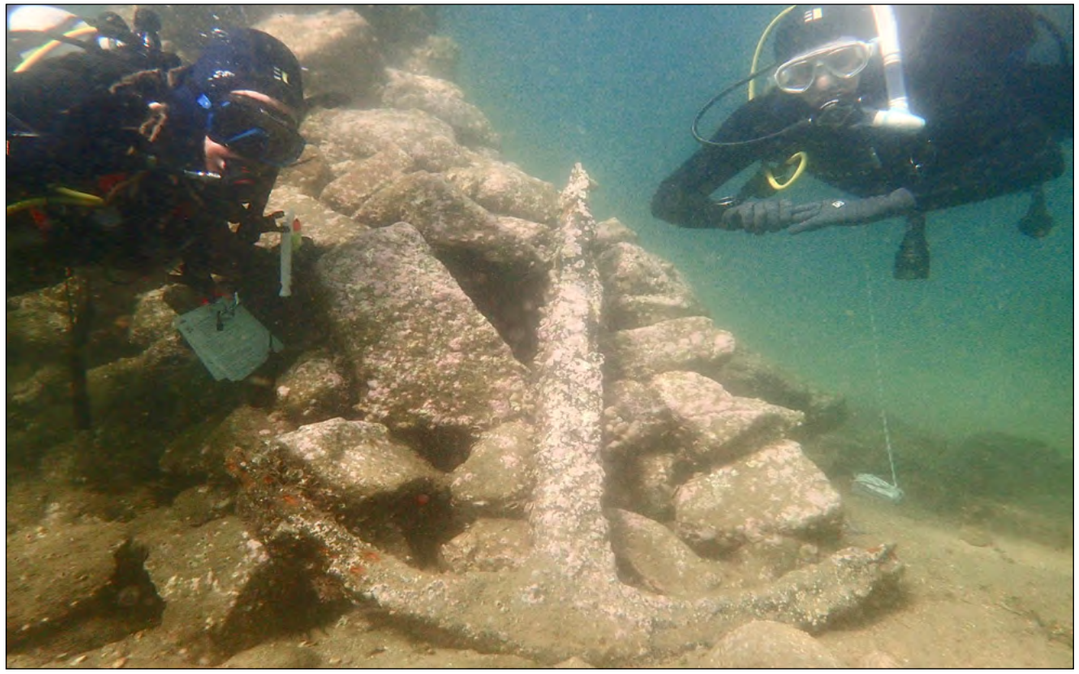
Sometimes you will get Sea Horses on the top of the reef but in the gullies, you will see Sydney Cardinal fish, Cuttlefish, Estuarine Catfish, Stingarees, Scorpion fish., Moray Eels and Leatherjackets.

When the reef shallows up to around 3-4 metres head back on the outside of the reef in a North Easterly direction keeping the reef to your right.

Again, you can 'horseshoe' up and down the gullies on the way back.

When you come to the end of the reef keep heading in a North/North-Easterly direction and you will come across the shoreline.

Have faith in your compass work it seems like a long swim over a lot of sandy nothing on the way to the rocks. Its only about 80-100 metres but it seems longer.



Dive the Continent
Dive OZ

By: Graham Willis

Head North-West keeping the rocks to your right and you will join up with the other dive below.

If you are going to head straight to the swim throughs and the rocks shelves to the North, surface swim to the end of the jetty and then drop down.

Head to the North and you will come across a rock cairn and a large admiralty anchor, which always makes for a nice photograph.

Keep going with the rocks to your right and you will notice several rock shelves…keep a wary eye out for fishing lines along here.

The shelves hide Morays and Octopuses and as you swim along you will come to the first of a couple of swim throughs.

They are open to the sky, so they are just a bit of a narrow passage but have a good look for the Wobbegongs that are often lying around in the shadows.

You'll also see shoals of bullseyes here as well as Old Wives.

Watch your buoyancy because it shallows up to around 2 metres here due te rocks that have fallen in over the swim through. After that you will come across another 'passage' to navigate.

There is a large rock to swim around with Sea Tulips and some hard corals on it …as you do that head back.

It is a good idea to turn around here for two reasons, one is that it starts to get really shallow and the second is that the current tends to pick up if you come away to far from the wall.

There is often a lot to see at Camp Cove with Octopus, Wobbegongs, Cuttlefish, Pipefish, White's seahorses, Morays, Stingarees, Numb rays, Old Wives and a range of Leatherjackets.

The simple navigation, easy entry, shallow depth and protected nature of the site combined with the fish life make this a great spot for a night dive.

Before you head in for a dive check out the visibility and any recent species sightings on the Sydney Viz Facebook.

Dive the Continent
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By: Christo van Jaarsveld

Potato Grouper/Bass

The Potato bass is a long-living predator which can grow up to 2m.

This fish is a highlight of many reefs as their inquisitive nature often leads to them coming out of hiding to inspect the divers.

This large, robust member of the rock cod family (family: Serranidae) is grey to brown in colour and is covered in dark oval spots. The tail is rounded and the eyes are quite large.

Potato bass can grow to 2m in length and may weigh up to 100kg. Its name is a reference to the potato shaped spots on the body. Interestingly, the Potato bass is related to the tiny sea goldies commonly found on reefs. The rock cod family is therefore very diverse in both size and shape.

The Potato bass frequents rocky and coral reefs down to depths of 150m. It is often found sheltering in caves, but is usually territorial over large areas of a reef. Potato bass occur along the whole east coast of Africa, into the Indo-West Pacific, all the way through to Japan and Australia.

Although few studies have investigated the breeding behaviour of the Potato bass, it appears that spawning occurs in spring and summer. Sexual maturity is reached at about 90cm and pairing during the breeding season appears to involve elaborate courtship displays, complete with colour changes.

During courtship, both male and female fish become much lighter in colour and engage in a ritualised mating 'dance' that includes rubbing their bodies together and swimming in tight circles a few metres above the reef. After this serious display, eggs and sperm are released and fertilisation occurs.

This solitary predator feeds on a variety of fish, crabs and rock lobsters using its huge mouth to engulf prey – prey is usually ambushed and snatched after a short chase. The jaws of the Potato bass bear several rows of backward-facing teeth as well as a number of small, sharp canines. This highly territorial species is one of the most dominant predators on a reef.

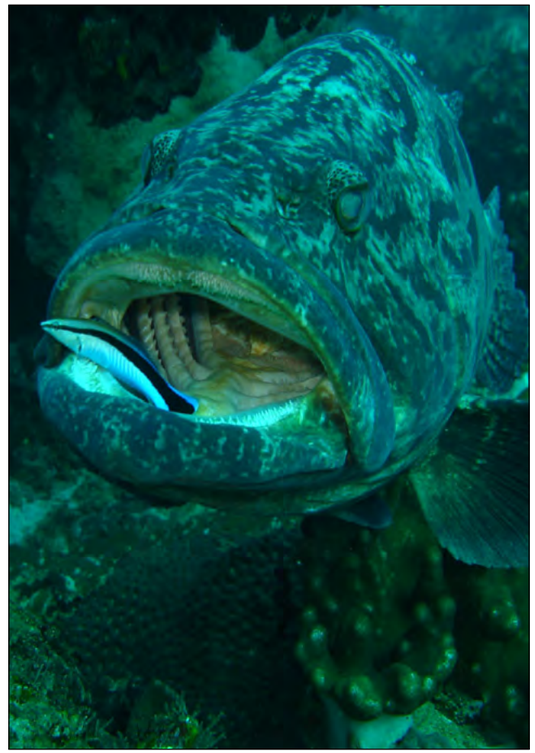
This slow growing, long-living fish is vulnerable to over-exploitation because it is commonly found in shallow waters and has an inquisitive nature.

Since few studies have been undertaken on this species, little is known about its life cycle. As top predators, Potato bass are often the first to take bait, and as a result, they are easily caught.

In fact, the absence of these fish on a reef is an indication of intense fishing. Spear fishers in particular find the Potato bass an easy target as the fish will venture out of its hole to investigate a diver in its territory.

As this fish does not move very great distances, marine reserves are an effective tool in their protection.

Weird and Wonders
Marine Life Facts



By: Neville Ayliffe Photo: Christopher Bartlett

Climate Change

Part II

What we can do about it.

For the last 10 000 years, our earth's thermostat has been set to an average surface temperature of 14°C, which has suited us all splendidly, allowing our species to create a truly global civilization in the last century.

At the heart of our thermostat though, is CO2. Every time we turn on a light, cook a meal, drive a car, we are releasing more CO2 into the atmosphere, altering our delicate thermostat.

CO2 is a waste product of the fossil fuels almost every person on the planet uses for heat, transport and other energy requirements. Fossil fuels, i.e. coal, oil, and gas are all the remains of organisms that drew carbon from the atmosphere millions of years ago. When we burn wood, we release carbon that has been trapped out of circulation for maybe a few decades but, burning of fossil fuels releases carbon that has been trapped for perhaps 50 million years. As carbon causes climate change, the more carbon-rich the fuel is, the more danger it presents to our future.

Coal is particularly rich in carbon – burning one ton of coal produces almost four tons of CO2, and if that isn't bad enough, it also releases sulphur (acid rain).

The majority of our power stations are coal-fired, which use low grade sulphur-rich coal. The fuels derived from oil are less carbon-rich, and the fossil fuel with the least carbon is Methane (gas).

At the rate at which we have been burning fossil fuels, we could see a doubling of CO2 in our atmosphere by the end of the century, i.e. from three parts per thousand at the beginning of the 20th century to six. This has the potential to heat our planet's surface by 3-6°C, which would have catastrophic consequences.

What can we do? We have to limit our personal consumption of fossil fuels.

1. Save electricity wherever possible. Virtually all our electricity is derived from coal-fired power stations. Every time we flick a switch, we are effectively burning some coal.

Our current power shortages during peak times have resulted in a need to build even more coal-fired power stations.

Some painless suggestions to save electricity are:

- Replace all conventional light bulbs with energy saving bulbs. This cuts your lighting bill by 65%.

- Consider replacing your electric geyser with a solar powered geyser. Up to 40% of your household electricity bill is attributed to water heating. They are relatively cheap, the payback period is four years and thereafter, free carbon-free hot water! At the very least, insulate your geyser and turn the thermostat down to 50°C.

- Use water sparingly! Carry a big bucket of water up a hill a few times and see how much energy you use! Install a low volume shower nozzle – you'll hardly feel the difference, but will save 20% on your water and heating bill.

Better still, shower with a friend (or if you are married, your spouse, of course!). And males, use the garden to relieve yourself at least once a day – such a waste of nutrients and water!

- Try to use alternate sources of energy where possible. Solar and wind-generated power is carbon free.

2. Regarding carbon emissions from oil, bear the following in mind:
- Next time you buy a car, consider a more fuel-efficient model. A large 4x4 may not be necessary!

- Form lift clubs.

- Fly less! Intercontinental flight releases massive amounts of CO2. Consider taking fewer overseas holidays and explore your own beautiful country.

3. Plant as many trees as you can. Trees are carbon sinks, i.e., they absorb and fix CO2 from the atmosphere. Planting 30 trees a year can go a long way towards neutralising your personal carbon emissions. The oceans are also carbon sinks. Look after them!

4. Log onto www.carbonfund.org and calculate your own carbon footprint, including household, car and air travel emissions, and then, for very little cost, neutralise them. This donation goes to developing alternative energy resources, distributing low energy bulbs, etc.

5. Another important Greenhouse gas is Methane. It is 60 times more potent at trapping heat than CO2 but doesn't last long in the atmosphere. Methane is produced by microbes in oxygen-less environments such as stagnant pools and bowels. So, burp and fart less often!

The main culprits are the billions of ruminants on the planet, i.e. cattle. Some countries have suggested a methane tax, payable for every head of cattle. Irate farmers then formed an organisation called Fighting Against Ridiculous Taxes, FART for short!

Seriously, though, unless we all so something to reduce our carbon footprint, individually, nationally and globally, and are able to reduce carbon emissions by 70% by 2050 (i.e. double the pre-industrial revolution level) not only our coral reefs, but our whole planet will be in dire straits.

Let us not, at the end of our lives, look at the horror and say, "you are my creation!".

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Can Leatherback Turtles adapt to climate change?

By: Annatjie Rademeyer

Apart from the fact that leatherback turtles are on the Red Data list, they are also threatened by climate change. Will they adapt and survive?

Leatherback turtles (Dermochelys coriacea) are the largest of the sea and land turtles. They can weigh up to 500kg and reach lengths of almost 2m from head to tail end. The largest one ever recorded weighed a massive 916kg.

Now, if you do not know the difference between a leatherback turtle and other sea turtles, here are a few pointers. They have smooth, leathery shells (hence the name) which is softer than other turtle shells. The shell has ridges running from the shoulder to the tail end while other turtles have harder shells which usually have multiple sided individual 'scales' on them. Leatherbacks are the only member of their family and are unique among reptiles in their ability to maintain a constant internal body temperature higher than the surrounding water.

Individual turtles have been found as far north as Alaska and Norway, and as far south as the Cape of Good Hope in South Africa, southern Chile and Argentina. They are found in all the large oceans: the Atlantic, Indian and Pacific. Leatherback nesting sites are found in many countries around the world, including those in the Americas, Africa, Asia and Australasia. They need wide, soft sandy beaches with easy access from the ocean to build their nests. Once the nests are dug, they deposit up to 100 billiard-ball sized eggs and close the hole carefully. This nesting process is repeated 4-7 times during egg-laying season with 10 days intervals. The female returns to the ocean and only after the season is over, will she eat again.

The incubation period for the leatherback turtle eggs are 60 days. This is a critical period in which the temperature must be perfect. Colder temperatures produce males and warmer temperatures females. This is where global warming – or climate change – comes into play for the first time with the lifecycle of these majestic giants. The overall rise in the earth's temperature will cause only females to develop, which will have a devastating effect on the population, because all the eggs cannot be fertilised by the few males which might be still around – their life expectancy is a maximum of 40 years. This is after they have run the gauntlet of birds, crustaceans, humans, reptiles and feral animals like dogs and pigs... Now they have to survive until adulthood which takes between six and 10 years for females.

Once they are big enough so that the predators in the sea cannot eat them anymore (except for tiger sharks) they still have to contend with what we humans dump into the sea. Jellyfish are the major food ingredient for leatherbacks; these floating animals are found in great numbers where ocean currents meet, and where cool, nutrient-laden water moves upwards from lower depths. These sites may be thousands of kilometres away from the turtles' nesting sites, and are the reason for their huge migratory distances – further than any other marine turtle species. And hence the problem arises. Plastic bags and balloons look very similar to jellyfish when they are drifting in the ocean currents. Ingestion of these can cause malabsorption and internal blockages.

Coastal development is another problem for the turtles. Beaches are prime property for developers and because top dollar is paid, owners expect to be as close to the beach as possible. In order to stabilise the soil, sea walls are built to keep the sea away from the very expensive houses, but the cost to the environment is much more severe. Beach sand is washed away because of the unnatural movement of the waves against the sea walls and other blockages. Waste water and other runoffs also cause nests to be contaminated. The increased activity close to beaches results in more vehicles using the beaches and more people to move around on them. This is a major threat to turtle nests. The movement of cars and people on dunes also causes degradation of the dunes, which in turn causes wind patterns to change when moving over the dunes and the destruction of the plants which anchor these dunes. This has a major impact on important nesting beaches.

Another by-product of more people close to beaches, are the obstacles they leave on the beaches. For example, plastic lawn chairs. Females cannot climb over the rubble and hatchlings get caught in them and cannot make it to the ocean. Beach craft-like boats and jet skis are another danger to turtles. They are a major cause of turtle deaths when they collide with turtles coming up to breathe air – in California up to 80% of green turtle deaths are credited to beach craft. Furthermore, hatchlings are guided by the moon when they emerge the first time and beachfront lighting can disorientate them and lead them away from the ocean.

The list goes on and on and if you are really interested in all the causes of turtle numbers declining, you will find a host of information on the web. But the question remains, can the turtles adapt to all of this happening on their doorstep?

The wonder of biological evolution lies in its definition – 'a gradual change in the characteristics of a population of animals or plants over successive generations.' Marine turtles have been around since the late Triassic period – that is roughly 227-206 million years ago – and have evolved to their current day equivalents, gradually updating and improving their body shapes and adapting to their environment. So we know that they are adaptable.

The problem which arises is the speed at which their environment has been changing in the past 100 years or so. Taking into account the period they have been in existence, the past 100 years is quicker than the blink of an eye. In that period, their whole ecosystem has changed rapidly; more carbon dioxide, warmer waters, smaller beaches, less beaches and more pollution. These rapid changes in combination with the leatherback's long and slow-maturing lifecycle, will limit the species' ability to adapt quickly enough to prevent a catastrophic population impact.

Most humans tend to plough forth without any regard for the consequences of our actions, more so when it comes to protecting our sea life. There is a clear need for greater protection of leatherback turtles and marine turtles as whole. You can help the turtles adapt by slowing down global warming – start in your backyard today.

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GLOBAL NEWS

DAN and Indonesia Ministry of Tourism Advance Commitment to Safe Diving

Divers Alert Network and the Indonesia Ministry of Tourism are moving forward with their commitment to promoting dive safety in Indonesia.

Dive the World
Global News

DAN President and CEO Bill Ziefle and COO Panchabi Vaithiyanathan met with Indonesia Minister of Tourism Dr. Sandiaga Uno on September 1 to further the two organizations' Partnership to Promote Diving Safety.

The meeting took place in Jakarta amid the opening of Deep and Extreme Indonesia, Asia's largest outdoor adventure, diving, and marine tourism show, and followed the signing of a memorandum of understanding earlier this year in which the organizations committed to working together to promote safe diving.

In the months ahead, DAN's Indonesia team, led by Ronny Hertiadhi and Bayu Wardoyo, will be undertaking various initiatives including raising awareness for the new DAN Emergency Hotline in Indonesia (which is available in Bahasa Indonesia and English), training physicians through DAN's Academies of Dive Medicine, conducting inspections and providing support for recompression chambers, training chamber operators, disseminating safety resources for divers (new and experienced), and supporting dive professionals and operators with free safety consultations, safety seminars, and risk mitigation measures.

"We are so pleased to be working with Minister Uno and his colleagues on this bold initiative," Ziefle said. "Their enthusiasm — and the enthusiasm of the attendees at the DEEP show — was inspiring.

The ministry has embraced the importance of safety in promoting Indonesia as a great place to dive, and we are excited to work alongside them to implement meaningful programs and strategies."

While the effort is ongoing, the next major milestone in the collaboration will take place on September 13, when DAN Vice President, Risk Mitigation, Francois Burman and DAN Vice President, Medical Services, Matías Nochetto will travel to Indonesia to present a series of lectures and safety presentations to dive operators and medical professionals around the country.

About DAN: The world's most recognized and respected dive safety organization, Divers Alert Network (DAN), has remained committed to the health and well-being of divers for more than 40 years.

The organization's research, medical services, and global-response programs create an extensive network that supports divers with vital services such as injury prevention, educational programs, and lifesaving evacuations. Every year, hundreds of thousands of divers around the world look to DAN as their dive safety organization.

Join the DAN community or learn more at DAN.org.

DAN WORLD

Lelebet by lelebet – Solomon Islands tourism slowly Returns

Honiara, Solomon Islands – Just three months after the Solomon Islands reopened its border on 01 July after an 800-day lockdown, official visitor arrival (VA) numbers for Q3 2022 show the destination has got off to a far better than expected result.

The figures, released by the Solomon Islands National Statistics Office (SINSO), show a total of 2481 international visitors travelled to the destination between 01 July and 30 September 2022.

Once again Australians made up the bulk of the numbers with the 1038 figure recorded comprising 41.8 percent of the total intake for the period.

Acting CEO & Head of Corporate Services, Dagnal Dereveke said he was sure some might see the 2481 total number as representing a drop of almost 68 percent.

"But when you look at our VA count which we started from ZERO on 01 July, 2022, this is a fantastic outcome for the country's tourism sector, what you might call a real 'glass half full' scenario," Mr Dereveke said.

Mr Dereveke said visitor arrivals from the Solomon Islands other key source markets – the US, New Zealand, Papua New Guinea and Fiji – while still slow, had shown month on month improvement across the quarter.

Prior to the pandemic, the Solomon Islands was hosting some 29,000 international visitors annually with Australian traffic constituting around 45 per cent of the total and total visitation growth annually ranging between 7-10 percent.

"Our primary focus is to regain those Australian numbers as quickly as possible," Mr Dereveke said.

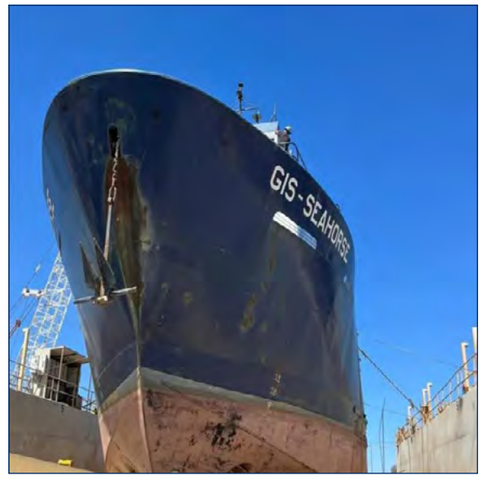
"We know we have a long way to go before we regain our pre-COVID numbers.

"But we are very cautiously confident and with continuing effort, good marketing and profile rebuild we can get back to where we were before the pandemic in relatively short time."

Tourism Solomons
Solomon Is.

Sea Shepherd Conservation Society Fleet

SEA SHEPHERD

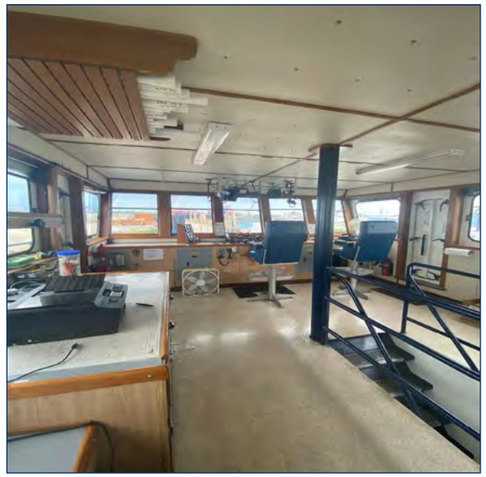


We are pleased to welcome to the Sea Shepherd Conservation Society fleet the M/V Seahorse, an offshore support vessel.

Earlier in the summer we had the M/V Tiger under contract, but it soon became clear that its sister ship, the Seahorse, would be a better fit for our direct action campaigns.

We completed the purchase of Seahorse in August and it is currently being retooled for Sea Shepherd's operations.

We are preparing the ship for our expanded Operation Milagro, which is the next step in our 9 year partnership with the Mexican Navy to protect the endangered vaquita porpoise.



Upgrades include a modernized electrical system, sanitization of the water filtration system, bolstering the navigation system, and new communications gear, specifically a new satellite system for strong data and communications transmittal.

Upon completion of its restoration, the Seahorse will depart Louisiana by way of the Mississippi River, head through the Panama Canal and engage in Operation Milagro by late October. Welcome Seahorse!

Dive the World
Maldives

By: Johan Boshoff

The Maldives

Exploring the Maldivian Atolls

The Maldives archipelago consists of a group of 26 natural atolls. Around the atolls you will find more than 1 190 islands, of which only 200 are inhabited. The rest of the islands are a diver's paradise.

By: Johan Boshoff

Blue waters, white powdery beaches, tall palms and some of the most incredible underwater wildlife on our planet rises from the deep blue waters in the middle of the Indian Ocean, with atolls that are packed with reefs. This archipelago and underwater paradise is known as the Maldives.

The beauty of these tiny atolls is breathtaking and surpassed only by the astonishing spectacle of the colourful and diverse marine life on display.

The waters have remained crystal-clear and the pinnacles, drop-offs and reefs are swarming with marine life.

You can explore the atolls of the Maldives from any of the resorts on the islands, but to see the best that the Maldives has to offer and view a variety of dive sites and marine life it is best to do this trip from a liveaboard.

Diving from a liveaboard is much easier and you can cruise around the different atolls and dive all the best reefs, not being bound to just one destination.

Blue O Two operates liveaboards from the Maldives and these range from budget to absolute luxury.

I had the opportunity to dive and explore the atolls from the luxury M/V Carpe Diem.

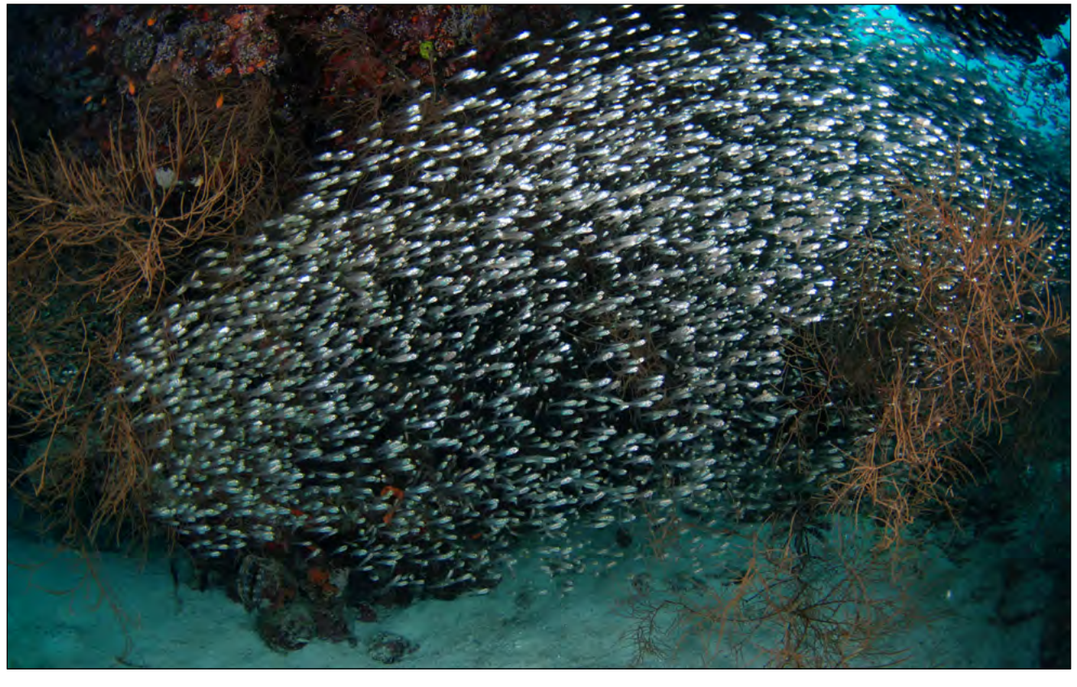
The 35m long motor safari yacht with a wooden hull offers a range of cabins from double rooms to a beautiful, large king suite on the main deck with stunning views across the water.

Cabins and facilities are spread over four decks, so with a maximum capacity of 20 guests, there is ample space to enjoy the peace and tranquillity of the Indian Ocean.

The lower deck provides six standard cabins with en suite bathrooms.

Even though these are the standard rooms, they are large and comfortable.

The main deck has also two comfortable high standard cabins and this deck is used mainly as the lounge and



By: Johan Boshoff

entertaining area. The spacious entertainment area is primarily used for the dive briefings with a 180 degree view of the surrounding ocean.

The lounge area is equipped with a flat screen TV, DVD/MP3 player, coffee/tea and drinking water available 24 hours a day.

Outside of the lounge area there is another sitting area in the shade with comfortable cushions, where you could have your afternoon rest or just enjoy the spectacular views of the islands or the sunset.

The upper deck is where you will find the bridge area with a C-shaped sofa/ reading area, in house library, a studio with internet, a shop and some business centre facilities. On this deck you will also find the deluxe cabins.

At the back of this deck is the main open air dining area and bar where meals are served as a semi buffet that is prepared by their dining chef. They served a variety of meals but the one that I enjoyed the most was the night when they took us to one of the islands for a braai – here we found the most beautiful scenery you could imagine on this little island in the middle of the ocean.

From the dining area a staircase ultimately leads you to a 115m2 sun deck, which is partially shaded and has a sitting area in the middle with some lounge chairs where you can catch a nice tan.

But the main reason that I went there was for the diving. On this trip we did the Classic Route with a twist where we started our diving at North Male, went to South Male then South Vaavo and ended our trip at South Ari (Rashdoo).

The diving around the natural atolls is spectacular, with over 700 common fish species in the waters and many more still to be discovered and classified.

Invertebrate species are estimated to be

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By: Johan Boshoff

in the tens of thousands and this makes it one of the best sites that you can dive.

It's by far one of the richest and most diverse undersea habitats you will encounter during one dive because the government has taken steps to protect these waters from the detrimental effects of over-fishing, coral mining, anchor damage and rubbish.

The average water temperature of 29°C and crystal-clear waters filled with pinnacles, drop-offs, caves and coral reefs that are teaming with fish makes this a year round holiday destination.

As the ocean currents eroded the atolls' rims, they created channels that provide extraordinary diving for the modern diver.

At the beginning of the trip I was wondering why they decided to take us to these particular atolls, yet by the end of the trip I realised that they had chosen these destination to give us not only the best destinations, but different types of diving and a show us a variety of marine life in the different ocean conditions.

North Male Atoll

This atoll is about 45 minutes from the airport and is well known for the easy diving with almost no currents and good visibility. The coral reefs here are normal wall dives or mostly pinnacle dives that concentrate more on a large variety of fish and good coral life.

Schooling reef fish are commonly seen here amongst the soft coral growth and in the overhangs you can find plenty of small fish. This is a good start to the trip so that you can get used to the diving conditions before you do the next leg of the trip where the dives become more adventurous.

To name just a few of the species to be found here, we saw everything from turtles and octopus to the giant Napoleon Wrasse.

Dive the World
Maldives

By: Johan Boshoff

South Male and Vaavo (Felidhe)

These two atolls are found about a two hour cruise from the airport and are famous for the pelagic fish and the channel diving.

Drift diving is the most common form of diving in the Maldives, and as with all diving in these waters, most of the action takes place at the point of the current. Tides often determine the strength and direction of the currents and visibility depends on where you dive.

A rising tide brings clear waters from the ocean into the atoll, while receding tides carry out less clear water from inside the atolls.

The dive guide often jumps into the water to determine the exact strength and direction of the current. Here you can encounter large schools of pelagic fish such as sharks, eagle rays, dog tooth tuna, dolphins, schools of black snapper and kingfish.

South Ari Atoll

On the furthest part of the trip, about six hours from Male, stunning wall and lagoons can be found. This is a famous place if you want to see mantas and whale sharks.

This is also known as 'the wild side' because it is on the open ocean side. Mantas are comonly seen here on the cleaning stations and can been seen almost anytime of the year. Whale sharks are also seen most months of the year, with the highest concentration seen in the monsoon transition months of April-May and October-November.

Diving from the Carpe Diem you can easily do three dives per day. You dive from a spacious diving dhonis (dive boat) that is housed next to the liveaboart. Your equipment stays on the dive boat for the entire trip so you just get on the boat and off you go.

Diving the way they do it with the dive boat makes diving much easier and

Dive the World
Maldives

By: Johan Boshoff

more relaxing throughout the trip. The dive boat has enough space for all the divers and is equipped with a nitrox membrane system, a bathroom with a hot water shower and toilet, two fresh water showers, a camera rinsing tank and 11,5 litre and 13,5 litre aluminium cylinders.

Information on the Maldives

The Maldives consists of more than 11 90 islands. The archipelago is grouped into 26 natural atolls that are scattered over an area of 90 000km² and lie southwest of Sri Lanka on the equator. This is a nation comprised of less than one percent land and over 99 percent water.

The Maldives' atolls are formed from coral structures and are separated by lagoons. They form part of a greater structure which stretches for 2 000km and is known as the Laccadives-Chagos Ridge. The islands are low lying, with the highest point at approximately 2,5m above sea level. Ring-shaped reef structures form the atolls and they provide a natural defence against the wind and wave actions experienced on these delicate islands. Millions of years ago, the atoll foundations were subsided volcanoes. Small fringing reefs began to develop around the volcano lip and these further developed into larger barrier reefs. When the volcano eventually subsided completely, these rings left a lagoon in the middle.

Aryans from India and Sri Lanka are believed to have first settled in the Maldives in 1500BC, and the nation gained their independence on July 26, 1965. As a favourite stop-over on the busy trade routes, the Maldives have had many visitors and influences over the years. Trade partners have included Arabia, China and India and the primary resources being traded include coconut, dried fish and above all else, the precious cowry shell. It's a small white shell found on the beach and has been used as currency in many countries

By: Johan Boshoff

in the Indian Ocean. Since the first tourists arrived in 1972, commercial fishing has become one of the main sources of income for the residents of the Maldives. a population of nearly 270 000 sees the country remaining one of the smallest independent nations in Asia, and just under a quarter of the population live in the capital, Malé.

The Maldives has a tropical climate with warm temperatures all year round and a great deal of sunshine. This warm climate sees relatively minor variations in daily temperature throughout the year, with the hottest month being April and the coolest being December. The weather is largely determined by the tropical monsoons.

There is a significant variation in the monthly rainfall levels. February is the driest month, with January to April being the 'dry' period. May and October record the highest average monthly rainfall. The southwest monsoon (known as 'Hulhangu') comes during the wet season, from May to September. Rough seas and strong winds are common during this period. The northeast monsoon (or 'Iruvai') falls between December and April. This is a period of clear skies, lower humidity and very little rain.

The Maldives lie in the equatorial belt and severe storms and cyclones are extremely rare.

A proud history and rich culture evolved from the first settlers who were travelling the seas in ancient times. The Maldives has been a melting pot of different cultures as people from different parts of the world came here and settled down. Some of the local music and dance for instance, still show their African influences with hand-beating of drums and songs in a language that represents those still spoken in East African countries.

As one would expect there is a great South Asian influence in the music and dance, and especially in the traditional Maldive food.

Dive the World
Maldives

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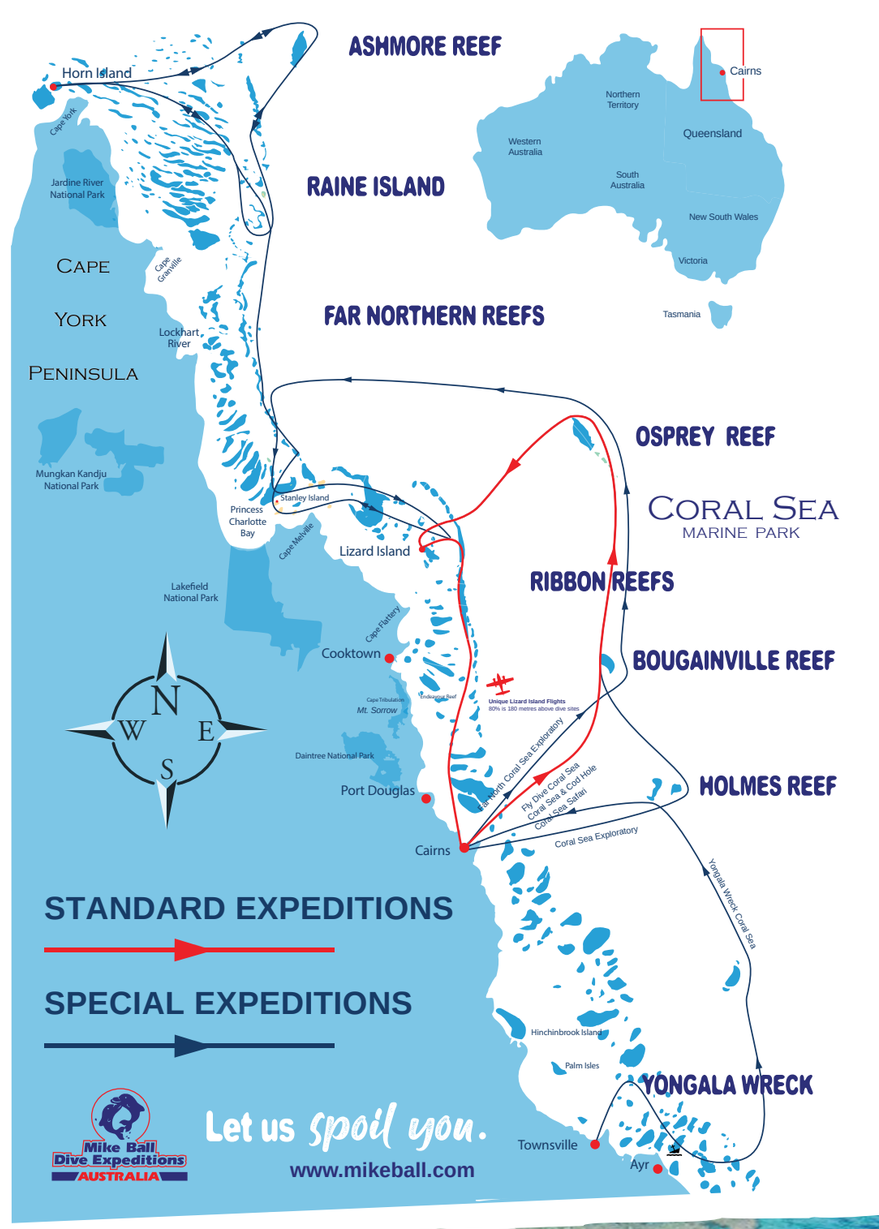

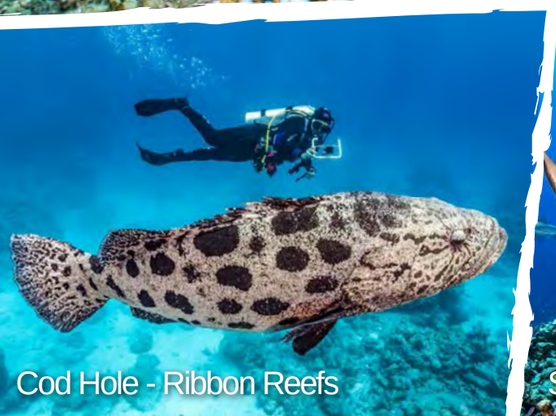
Cod Hole - Ribbon Reefs


Shark Attraction - Osprey Reef


False Entrance - Osprey Reef


Minke Whales - Ribbon Reefs

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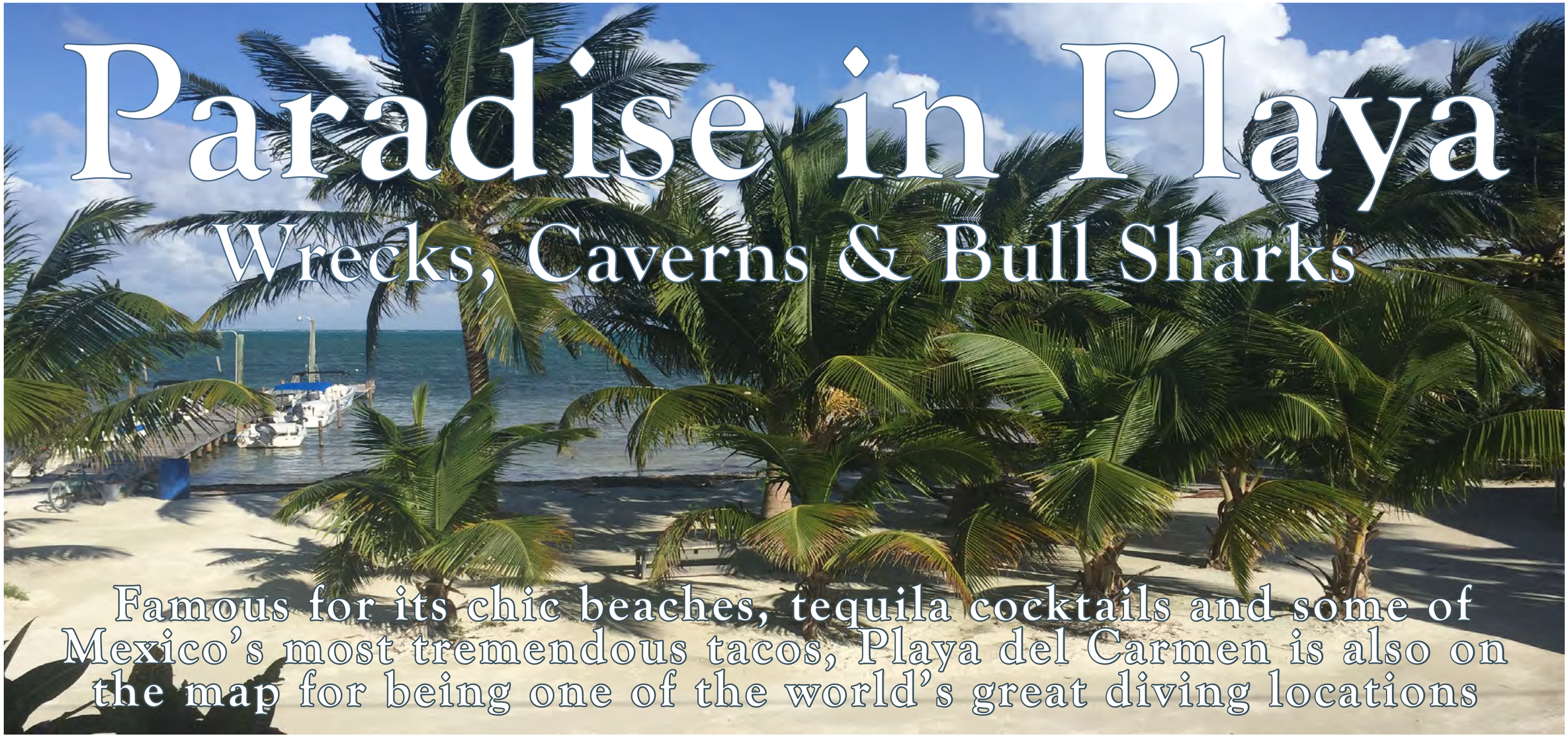
Dive the World
Mexico

By: Stef Mallaci

Paradise in Playa

Wrecks, Caverns & Bull Sharks



Famous for its chic beaches, tequila cocktails and some of Mexico's most tremendous tacos, Playa del Carmen is also on the map for being one of the world's great diving locations

By: Stef Mallaci

Mexico's Yuctan Peninsular has attracted jetsetters for decades.

They come in thousands to escape the humdrum of home and indulge in the perfect mix of white sand beaches, the finest of Mexico's scrumptious cuisine, and cocktails that go down all too easily. Go figure.

However, for divers there's the added appeal of world-class dive sites.

From Cancun's underwater museum in the region's north, to the great sinkholes - or cenotes - around Tulum in the south, the diving here is as varied as it mind-blowing.

Smack bang in the middle of these two lays the tourist hub of Playa del Carmen, perfectly suited to exploring the diving across the whole of Mexico's Mayan Riviera.

Within close proximity to some 10,000 or so cenotes, cave and cavern diving is big business here.

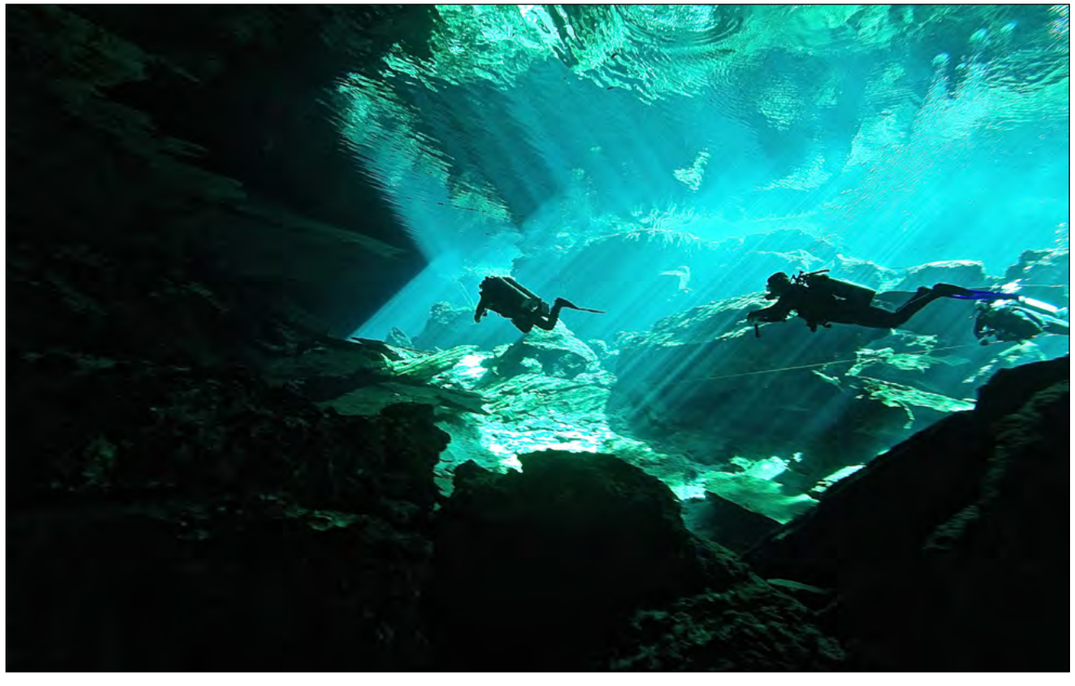
Just 20 minutes from the outskirts of town is the cenote complex known locally by its Mayan name, Chac-Mool.

It's one of about 30 cenotes popular with divers wanting to get their fix of cavern diving, though there are hundreds more open to cave diving and tech specialists.

One of the biggest dive operators in the region is PADI 5 Star IDC resort Mexico Blue Dream (MBD) which has been operating daily tours to the cenotes since the business was opened 7 years ago by French-Americans Patrice and Laure Cheurlin.

The agenda today revolves around two of the Chac-Mool's access points, Kukulkan and Little Brother.

MBD instructor, Maurizio, who has been diving the cenotes for more than 10 years, plans to show us these two sections in two separate dives.



By: Stef Mallaci

With a maximum depth of just 15m and always within sight of the natural light which filters through the entrance to illuminate much of the cenotes, diving in both Kukulkan and Little Brother is about as easy as cavern diving gets.

Quite simply these are some of the most spectacular dive sites I've ever had the pleasure of experiencing.

To say they're dramatic would be an understatement: vast, cathedral-like caverns adorned with stalactite chandeliers that hang obtrusively from the ceiling whilst stalagmites protrude from below create a limestone maze.

All around are shallow caves where pockets of air are trapped, beneath which the odd cenote molly or shrimp swims casually past.

The only other life here are cichlids and catfish - neither of which seem perturbed by the presence of us divers - but that isn't what this dive is about.

The visibility is unrivalled - expect nothing less than 100m, even 150m in places, or in more literal terms, as far as your torch will go.

However, descending to the deepest point of our profile, the visibility suddenly diminishes to less than a few feet; everything is blurred to the point that reading instruments or my computer, even pressed against my mask, becomes virtually impossible such is the density of the halocline.

This gassy layer of water, where fresh water meets salt, is a natural phenomenon that gives off an utterly sublime experience.

However, the dive's highlight comes on the ascent where wide openings, beaming with sunlight from above, create an aquarium filled with the sun's rays shining through in spotlights. It's magical, mystical and magnificent.

The next day we're out on the ocean with the first of our two-tank dive offering the opportunity to explore the Mama Vina - a shrimping boat intentionally sank in the mid-90s which now lies slightly on its side in about 30m of water.

Entering the water a 100m or so to the south of the wreck, our drift takes us directly to the site but thanks to the 30m+ visibility, common throughout the dry season, we see the Mama Vina whilst still in mid-water.

Coming out of the blue, it's as if she's sailing towards us rather than the other way round.

Approaching along the stern, our dive guide Al, a former US marine, times it perfectly so we're able to grab onto a safe bit of railing and head into the lower cabin.

A large moray eel, poking out of one of the ship's cubbyholes, greets us with its toothy mouth typically agape before we move to the upper deck and then up towards the satellite mast and crows nest.

The most unique part of the dive, we hold onto a purposefully tied rope to hang in the current and watch a large school of spadefish being stalked by a pair of barracuda before drifting back to the surface to await the boat.

There's a buzz on board, not least because the Mama Vina has delighted everyone in the group but also because of the prospect of the day's second dive.

It's one that isn't for everyone but an estimated 20,000 divers make the trip to Playa del Carmen specially each year for one reason – the waters off the coast here are one of the only places in the world where it's possible to dive with bull sharks, un-caged.

The sharks come reliably each year from November to March when males arrive from cooler waters in the north to mate with the females who travel to their

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By: Stef Mallaci

pupping grounds.

It's big business in Playa and whilst some operators will feed the sharks, MBD opts for a more natural observation; if the sharks don't show, there's no show, so to speak. Luckily for us, they almost always do.

The approach to Shark Point is made from up current so we make our descent whilst drifting. Al, a self-taught shark expert, explained in our briefing that the first sharks we'll likely see will be juvenile males acting as scouts.

He's right; before we reach the sandy bottom 24m down, a pair of 2m + sharks come out of the blue.

However, after just a few moments of waiting behind our roped off mark on the sand, two or three large pregnant female appear, circling us in figure eights. One of them, known as Big Mamma, is the alpha of the group.

At almost 3.5m long, and seemingly almost as wide, she's a magnificent example of one of the ocean's apex predators. She's clearly boss in these waters and her dominant swim, sometimes less than 4 or 5 feet from the group, is a reminder that we're guests in her world.

Skillfully, Al kicks up sand and pumps a half emptied cola bottle to mimic the heartbeat of a fish in distress.

It brings the sharks in closer, and closer still, so that every moment of our 25 minute bottom time is action packed.

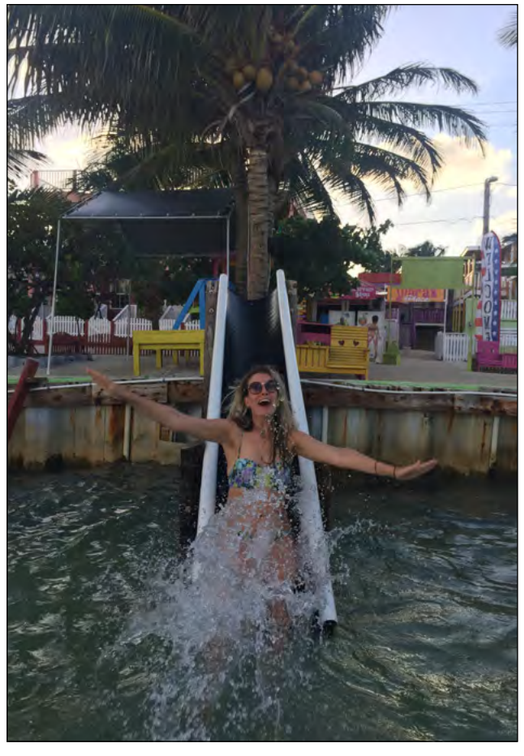
The thrills continue on our ascent and at our safety stop where Big Mamma reappears and begins to circle. With the group suspended in 5m of water, Al signals for us to huddle together and make our collective shape bigger – a tactic that he rarely has to employ.

It's an astute one nonetheless because the adrenalin being pumped during these 15 seconds rivaled that from any other shark dive I've been on – and that's having dived with some 25 odd species - including great whites and hammerheads.

With Big Mamma coming in closer to eyeball us once more, this magnificent creature disappears back into the blue as quickly as she had appeared to leave us with an enduring image: one of the ocean's apex predators, just meters away, in all her glory.

It's little wonder then that so many of family-owned Mexico Blue Dream's clients are repeat customers – coming for their yearly fix of sharks, wrecks, caverns, and healthy, if somewhat over dived, reefs that are all within easy reach of Playa del Carmen.

Talking to a couple in our group who are on their seventh trip to the region, it's easier to understand their sentiment.



Dive the World
Mexico

By: Stef Mallaci

The Mexican Riviera offers some of the most diverse diving anywhere in the world and, at least in terms of a sheer assortment of dive sites, there are not many other places that can rival it.

When to Go

Bull shark season runs from November to March when males and females meet to mate. However, if this time of year doesn't work for your timing, Mexico Blue Dream also offers the opportunity to see whale sharks at nearby Isla Holbox from May to September.

Cooler climes from October to November make low season an ideal time to visit the Yuctan Peninsular. Accommodations and flights can be cheaper then too.

Where to Dive

Originally from France, Patrice and Laure Cheurlin moved to Playa del Carmen and opened Mexico Blue Dream in 2008 before getting married (underwater of course) a few years later.

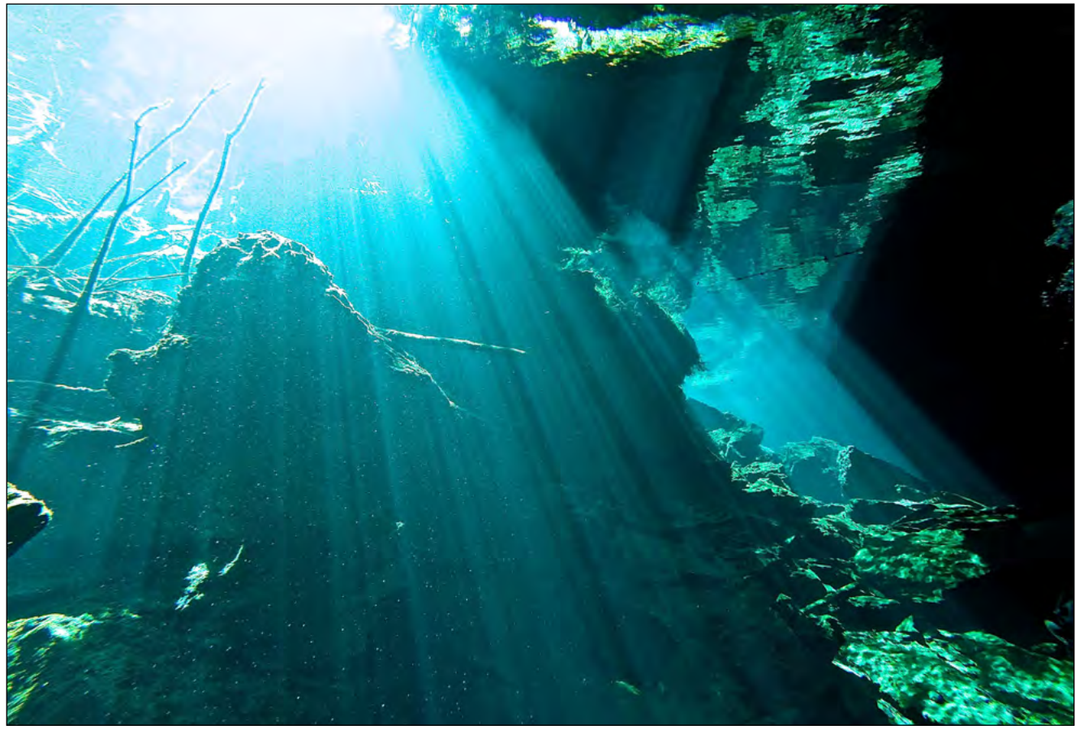
Starting with equipment for just 15 divers, their dive shop has since grown into 5* PADI IDC-rated facility and one of the Mayan Riviera's premier operators.

The shop is now run by Patrice and Laure's son, Romain, who heads up a friendly, multi-lingual team that has a clear passion for all things diving.

Mexico Blue Dream's equipment is first-rate, as are guide briefings and the company's knowledge of the local area.

No wonder so many of MBD's customers are divers who keep coming back year after year.

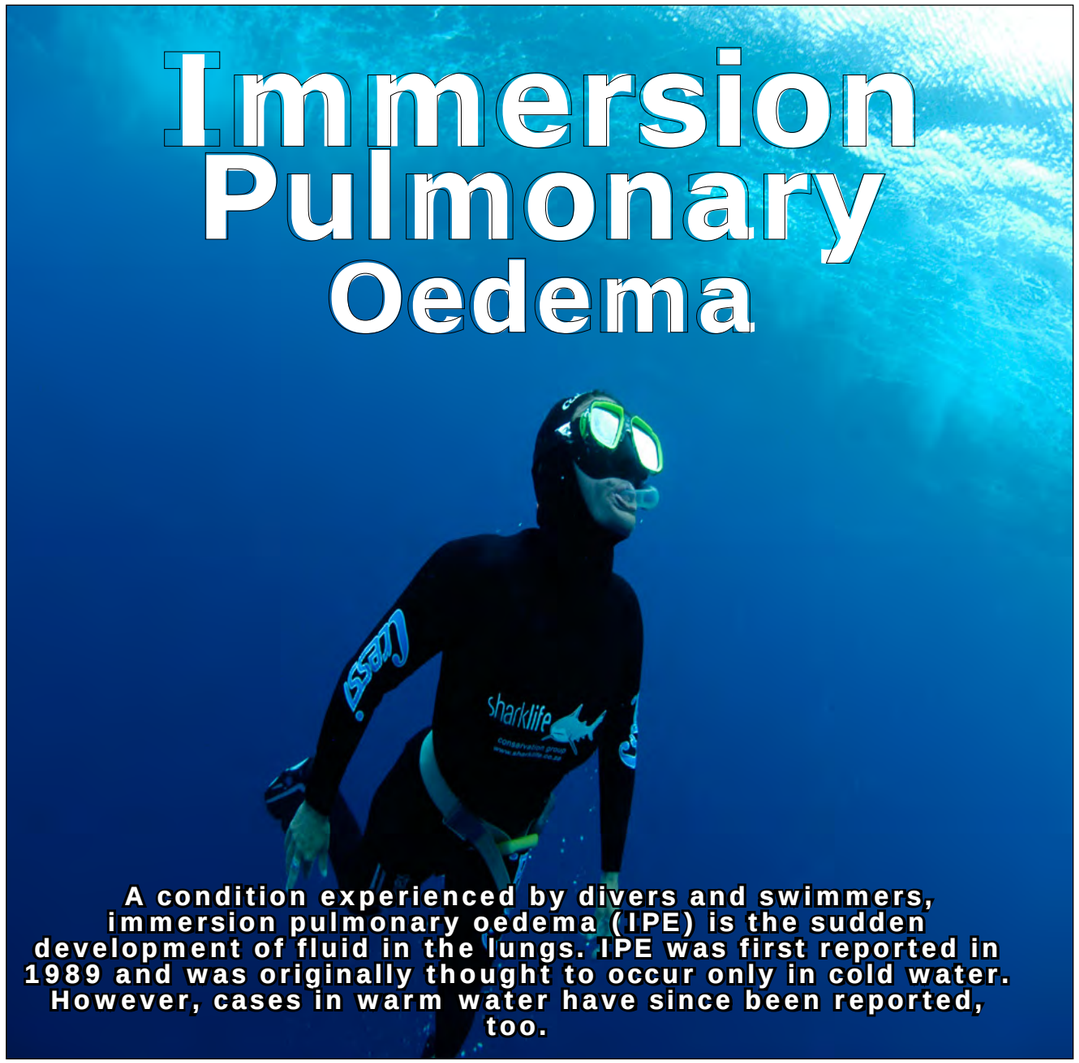
For more information and prices, visit www.mexicobluedream.com



Dive the World
Mexico

By: DAN

Immersion Pulmonary Oedema



A condition experienced by divers and swimmers, immersion pulmonary oedema (IPE) is the sudden development of fluid in the lungs. IPE was first reported in 1989 and was originally thought to occur only in cold water. However, cases in warm water have since been reported, too.

IPE is uncommon, and the causes of this condition are still not fully understood. Although IPE generally resolves quickly, respiratory distress in divers is very dangerous.

As with many other health conditions in diving, it's imperative to learn the signs.

Symptoms
Like drowning, IPE is the buildup of fluids in the air-containing spaces of the lungs, interrupting breathing.

But unlike drowning, the obstructing fluid comes from within the body rather than from inhalation of surrounding water.

The obstructing fluid results from abnormal leakage from the bloodstream into the microscopic air sacs within the lungs (alveoli).

This can be the result of heart failure or other cardiac problems, but IPE can also manifest in people for no apparent medical reason.

Symptoms include coughing, shortness of breath, and sometimes bloody and frothy phlegm.

Unlike pulmonary decompression sickness ("the chokes"), chest pain is not a symptom of IPE.

Cases cover the spectrum of mild to severe and are analysed based on factors including diver age, water temperature, and previously existing cardiac conditions.

Once the diver leaves the water, there is often spontaneous recovery, however, sometimes diuretics — standard treatment for pulmonary oedema — are needed. And IPE is not depth-dependent; it can occur even in very shallow water.

If symptoms occur during a dive, the affected person should communicate with their buddy and end the dive as quickly and safely as possible.

Once safely out of the water, the diver should be provided oxygen if respiratory distress or any other symptoms persist, their exertion should be limited, and they should be evaluated by a doctor.

Return to Diving
Experiencing IPE does not disqualify someone from participating in future dives, but caution going forward will be necessary.

A return to diving should be based on full recovery from a previous episode, a diver's physical condition and medical history, their doctor's evaluation, and the type of diving they intend to do.

A return to diving should be considered on a case-by-case basis.

A younger diver with no history of cardiac problems who developed a mild case of IPE should not be disqualified from future dives, however, if IPE symptoms ever develop again, more extensive evaluation may be warranted before any return to diving.

For divers with medical conditions who developed severe IPE and needed hospitalisation, further cardiac evaluation may be needed before they are permitted to return to diving.

A doctor may want to look for underlying artery blockages or heart valve issues. Anyone who experiences recurrent episodes of IPE should probably stop diving.

Mysterious IPE
It is still unclear why some individuals are more susceptible than others to IPE.

While there may be a link to cardiovascular conditions or hypertension, there are numerous scenarios in which a diver has experienced IPE without any apparent underlying conditions.

Until individual susceptibility is better understood, it's too difficult for doctors to make recommendations as to how it can be avoided.

Hopefully, future research can reveal more about its causes, and doctors can better predict who is at an increased risk of developing it.

Because it can happen in the absence of underlying conditions, all divers need to be aware of this condition so symptoms can be recognised and appropriate actions taken.

NEW: World.DAN.org
For an extensive range of diving health and safety information and downloadable resources, research studies, incident summaries, and free e-Learning courses, take the time to explore DAN World's new website.

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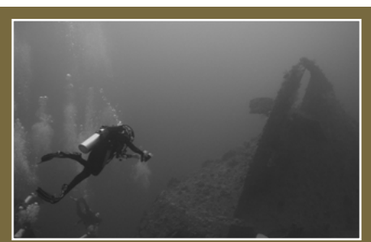
Exploration
Red Sea Wrecks

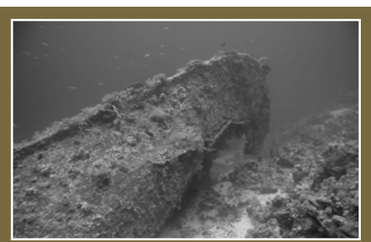
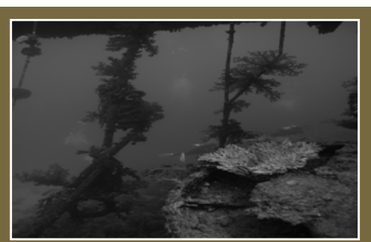
By: Amilda Boshoff

Diving the Great Wrecks of the Red Sea

Diving the Red Sea is the dream of most scuba divers, but incorporating all the beautiful wrecks and the interesting stories associated with the demise of these ships make it even more exhilarating.

Part II




By: Amilda Boshoff

As you swim above and through the majestic ships which came to rest at the bottom of the Red Sea, you can only imagine the panic and woes of those onboard the sinking ships which are now encrusted with beautiful, colourful corals and tropical reef fish which complete the picture.

Instead of following the 'normal' Red Sea route, why not discover the treasures beneath the azure blue waters of Egypt's Red Sea?

Wrecks of the Red Sea

Name: The Dunraven
Type of ship: Iron Screw Steamer – planked, capable of being powered by either sail or steam
Location: South of the Beacon Rock lighthouse on Sha'ab Mahmud on the Strait of Gubal.
Date built: December 1873
Length: 79,6m
Weight: 1.800 tons
Date wrecked: April 24,1876
Date discovered: In 1977 by Howard Rosenstein and Carl Roessler. Geologist Arye Keller discovered a wreck at these co-ordinates but didn't know that it was the Dunraven and gave vague directions to Rosenstein
Port of origin: The Dunraven was owned and operated by W. Milburn of London, and after successful sea trials, was used on the Bombay run
Destination: Liverpool, England
What was the ship carrying? General cargo which included timber, steel and cotton
Average depth: 22m
Maximum depth: 30m
Access: Day or safari boat normally from Sharm-El-Sheikh, occasionally from Hurghada

In January 1876, 27-year-old Captain Edward Richards Care supervised the loading of the Dunraven in Liverpool.

It consisted of general cargo which included timber and steel for India's fledgling heavy industrial ambitions.

The trip out to Bombay was without incident and by the end of March they were loading her for the return leg.

Eventually, the Dunraven left Bombay on April 6, 1876 loaded with 'valuable general cargo bound for Liverpool.'

The ship made good time across the Indian Ocean and continued on and up through the Red Sea. At 2:15am, the Master went below leaving orders to be called in one hour, but at 2:40am the beacon light was lost to view – as though it had simply gone out – but the Master was only called sometime between 3:30 and 3:40am.

When Captain Care arrived on deck, land was plain to see some six or seven miles off the starboard side in a northerly direction.

It was now 3:40am and he immediately altered course. Ten minutes later the look-out saw a large dark object in the water which he thought was a buoy and called this out to the bridge, but he got no reply.

Exploration
Red Sea Wrecks

That instant, however, the Second Mate also saw the object but, thinking it was a boat, only casually reported this to the Master. Care immediately ordered the engines to be stopped but before this could happen the Dunraven struck rocks which immediately penetrated the fore compartment.

The steam pumps were immediately set to work and a fruitless attempt was made to heave her off by means of a kedge anchor.

By 7am, the water reached the engine room and put out the fires and by noon the starboard side of the upper deck was under water and the Master and crew took to the lifeboats.

They remained with their doomed vessel and at 4pm an Arab Dhow came along and took the shipwrecked mariners on board.

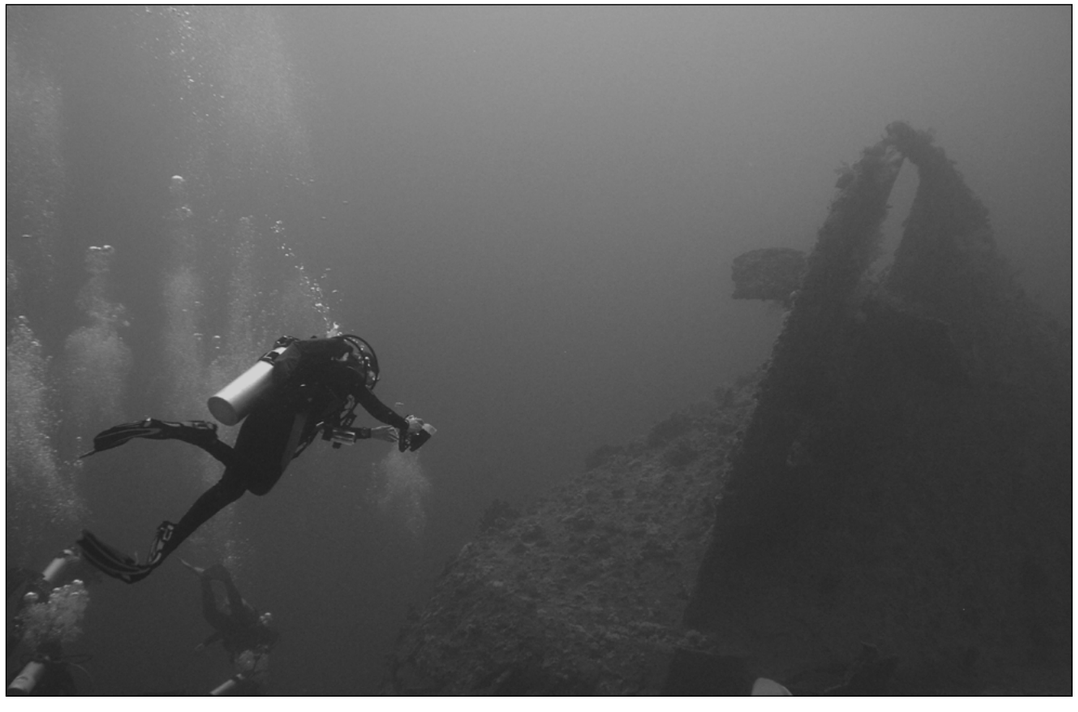
It was only at this time that the Master of the Dunraven was made aware if his actual position – off the southern tip of the Sinai Peninsula. At 5pm, the Dunraven slipped off the reef and sank in 27m of water.

For three days the Dhow lay at anchor over the Dunraven until Captain Care and his crew was transferred to the passing Italian steamer, Arabia, which conveyed them to Suez.

The Peninsular and Orient steamer, Malwa, later transported them all back to England.

In 1977 Howard Rosenstein began to investigate some information about the wreck given to him by local Bedouin fishermen and geologist, Arye Keller. He took a chance and by luck jumped into the water right on top of the wreck.

He had a group of American divers led by Carl Roessler of Sea & Sea fame as witnesses. In November 1979, the name Dunraven was found engraved on some fine porcelain after which researchers tried to determine precisely which Dunraven it was.



By: Amilda Boshoff

Confirmation was obtained when Howard and his divers cleaned off the lettering on the stern of the vessel using a pneumatic wire brush.

The Dunraven is almost completely upside down and she lies with her port side resting along an adjacent reef. At a depth of 17m, the upside down bow is the shallowest part of the dive, with the stern resting on the seabed at 30m.

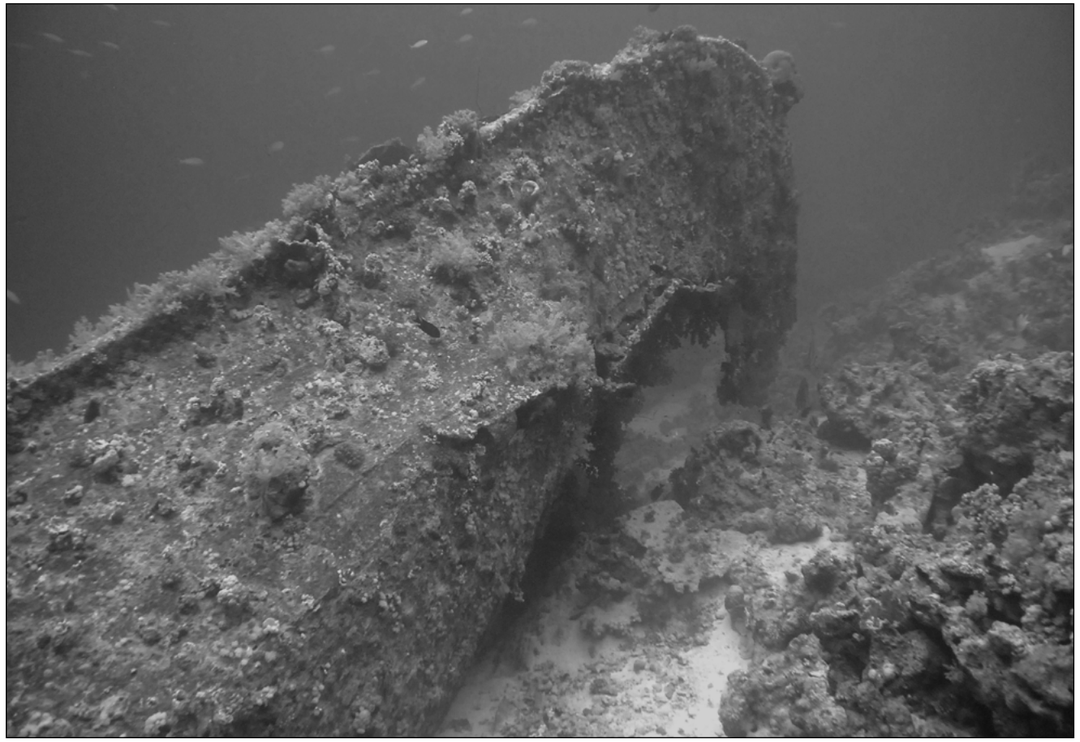
One can gain access through the three main openings at the stern, centre and the bow. The dive begins from the stern, the deepest point of the wreck.

After swimming for a few dozen meters, you can penetrate the hull which is populated by large groupers, Lionfish, swarms of Glassfish and multicoloured Alcyonarians.

It is best to exit through the opening by the engine room so that you can explore the outside of the bow area and the nearby coral garden. A group of Batfish is almost always present just outside the bow section. On top of the hull, the rudder and propeller are still in place, although one of the four blades is missing.

It is best to dive the Dunraven when the sea is calm and the weather is good. Preferably book your dive for the morning before the wind picks up in the afternoon – the good light also makes for stunning photographs. There is often a current moving to the north, and even though visibility may be good, it is advisable to take a torch.

Name: Kingston (Sarah H)
Type of ship: British merchant
Location: West coast of Shag Rock
Date built: 1871
Length: 78m
Weight: 1 449 ton
Date wrecked: 22 February 1881
Port of origin: London, England
Destination: Aden, Yemen



By: Amilda Boshoff

What was the ship carrying? Coal
Average depth: 12m
Maximum depth: 17m
Access: Day or safari boat from Sharm-El-Sheikh or Hurghada

On the morning of January 20, 1881, Captain Cousins sailed from London in charge of the Kingston – the destination was Aden in Yemen. Sailing via the Mediterranean and the Suez Canal, the Kingston finally cleared Suez on February 20, 1881.

The diligent captain took charge of the ship for the entire trip through the Straits of Suez which meant that he was awake for two straight days in a row – this caused more harm than good.

As the Kingston neared the open Red Sea in the dark, Captain Cousins felt that the immediate danger was over and that he could relax. He gave instructions to the First Mate and went to his cabin for a much needed rest.

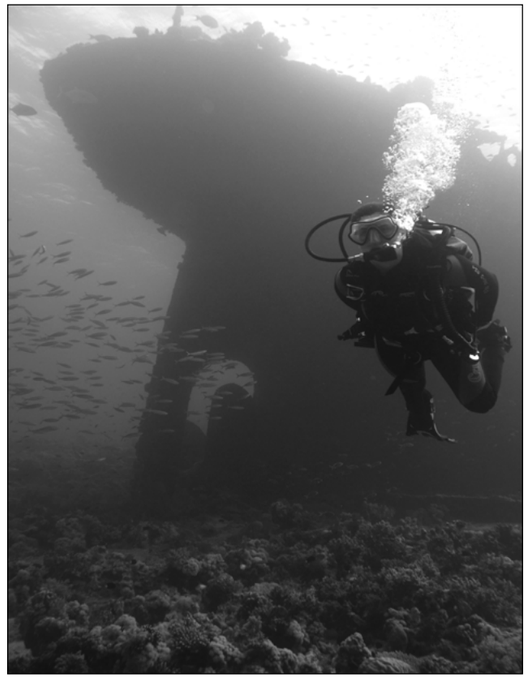
In the early hours of February 22 the Kingston struck Shag Rock. Within moments, the Captain was back on the bridge to find out what was going on.

For 48 hours the crew fought to keep the Kingston from a watery grave but to no avail. Captain Cousins and the crew stayed on the Kingston until the last possible moment when the Kingston suddenly settled by the stern and gracefully slipped backwards from the reef until only the masts were visible.

No injuries or loss of life occurred.
Your exploration of the ship starts at the stern at a depth of 15m where the intact propeller can be seen. The route continues inside the easily accessible hull as the wooden bridge is no longer there. This area is well lit by sunlight.

Of special interest is the remains of the engine room with the boilers still visible, whereas the bow area situated at a depth of 4m is destroyed. To the right of the wreck one can see the remains of the mast on the seabed.

The marine life here is particularly interesting and comprises Surgeonfish, Rabbitfish and Nudibranchs. From here you continue the dive either to the east or west to explore the reef which is populated by rich fauna inhabited by Jackfish, Groupers and Snappers, Turtles, White-tip reef sharks and Eagle rays. Schools of Dolphins are regularly also spotted in this area.



This wreck and the area around are home to beautiful hard corals. It is advisable to only dive the Kingston when the sea is calm as the wreck is quite shallow and tides also influence the amount of current present.

No torch is needed when exploring the wreck. There are no artifacts to be seen except for the visible propeller, but the framework encrusted with corals and marine growth is exquisite.

The wreck offers spectacular opportunities for photographers as visibility is good and beautiful silhouettes can be shot when the sun is shining from above. It is a beautiful and relaxed dive which is highly recommended.

Exploration
Red Sea Wrecks

Name: Giannis D
Type of ship: Cargo vessel
Location: North west corner of Sha'ab Abu Nuhas Reef
Date built: 1969
Length: 99,5m
Weight: 2 932 tons
Date wrecked: February 19, 1983
Port of origin: Croatia
Destination: Jeddah, Saudi Arabia
What was the ship carrying? Timber and coal
Average depth: 15m
Maximum depth: 27m
Access: Day or safari boat normally from Hurghada, occasionally from Sharm-El-Sheikh

The Greek cargo ship, Giannis D., crashed into Abu Nuhas Reef on its way to Jeddah while carrying a cargo of timber and coal.

Sha'ab Abu Nuhas is a magnificent coral plateau that barely reaches the surface and, from a distance, is not easily seen at all. Unfortunately, as far as shipping is concerned, it lies right at the very edge of the busy shipping lane called

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By: Amilda Boshoff

the Straits of Gobal which is found at that extreme North West corner where the Red Sea begins to narrow before it becomes the Gulf of Suez.

This unfortunate accident happened on April 19, 1983 when the Captain went to his cabin for much needed sleep leaving his crew to navigate the treacherous waters.

Having been built in 1969 in Japan she was first called Shoyo Maru before being sold in 1975 and renamed Markos. In 1980 the Greek company, the Dumard Shipping and Trading Corporation, bought the ship and renamed her Giannis D. The owner of the ship added a big D to the name (his initial). This beautiful vessel did not sink immediately after striking Abu Nuhas Reef, and the crew members were able to be rescued by the Santa Fe, an Egyptian ship.

The Giannis D. now lies on the sandy seabed at 27m in a north east/south-west direction with the bow separated from the stern section. Both lay on the port side and are covered with splendid soft corals – the centre section has collapsed but the bow and stern structures of the wreck are perfectly intact. The dive needs to be done in calm sea conditions starting from the stern section. This is the most beautiful and interesting part of the whole wreck and it is dominated by a big winch shaped like an upside down U that reaches up to 6m below the surface – in calm seas it is sometimes visible from the diving boat.

The command bridge has wide openings and is well illuminated, easily accessible and represents one of the most interesting points of the wreck – in the centre you will find the wheel house with the binnacle (scuba divers may feel disorientated inside the bridge due to the incline of the ship).

One can enter the engine room through an opening in the funnel which has light rays filtering through from above and is inhabited by a school of Glassfish. Inside it looks like nothing happened at all – the machinery, engines, pipes and instruments are still in perfect condition. You then exit the stern section and continue your exploration towards the bow, crossing the middle part of the hull which is completely destroyed. Pay close attention and you can find numerous wooden planks that were once part of the ship's cargo.

The bow of the Giannis D is cut off and bowed to its left side at a depth of 18m, but it is still perfectly intact. During the exploration of the wreck covered in red soft corals, small Table corals, Raspberry corals, sponges and anemone with their Clownfish, you come across numerous schools of Goldies and Glassfish. Lionfish are common on the upper bridge and huge Groupers and Batfish are ever-present along with many kinds of Parrotfish. In the crevices of the hull many Giant morays have found their home. Always be on the lookout for Dolphins in the midwater and on the surface as they like to play in this area.

The best time to dive is midmorning with full sunlight. The wreck is reached by zodiac, so be prepared and always take a torch to explore the inside of the wreck. The Giannis D. makes for great shots, with clear visibility and beautiful coral coverage. Overall, the Giannis D. is an excellent dive and one that can be enjoyed by every level of diver. Thankfully, no lives were lost during her demise, but shipping's loss is definitely diving's gain.

Exploration
Red Sea Wrecks

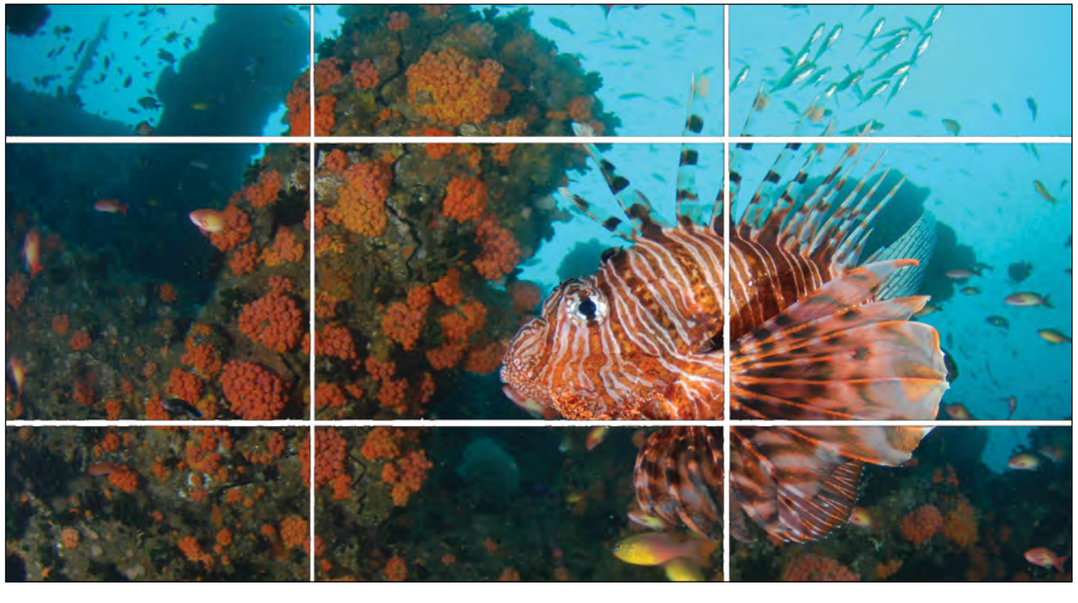
By: Karlien Euvrard

Without us being conscious of it, artists, designers and film producers have been employing a concept called the rule of thirds for centuries.

The reason why this technique is so important is because it establishes a sense of balance.

It also allows more background to enhance the story and provide perspective to your image.

What is the rule of thirds?
The rule of thirds is a concept which divides an image into nine vertical and horizontal imaginary sections.



Through the Lens
Photo School

This creates reference points which act as a guide for framing the image. The point or line of interest should appear a third or two thirds away from the frame or on one of the guidelines as opposed to simply aiming to get the object in the middle of the shot.

The rule of thirds applies to both portrait and landscape orientation but more particularly to the latter.

Most cameras' today have an option to superimpose a rule of thirds grid over the LCD screen, making it easier for the photographer to align the subject with the horizontal and vertical lines. As your experience grows, this rule will come naturally to you and you will automatically apply this rule without thinking about it.

The rule of thirds should generally be applied when taking pictures, but, it must be said that great pictures can be taken by violating this rule, so don't be afraid to go against the rules.

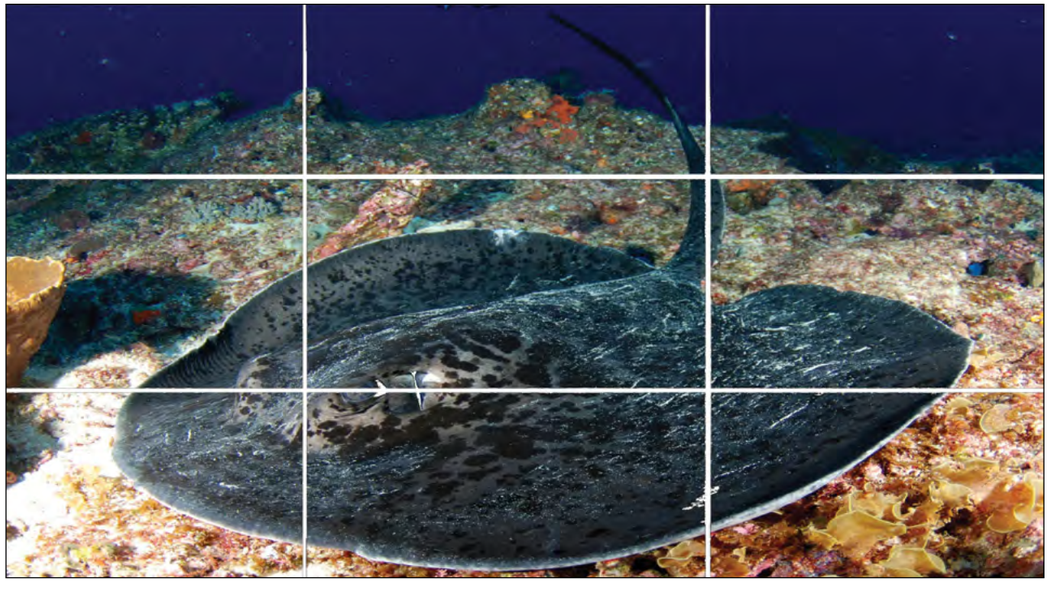
This is especially the case when taking close up shots – use your intuition when taking photographs. A few simple things to remember.

If the subject of your photograph is a fish, try and get the eye of the fish in one of the focus points and make sure that the eye is in sharp focus.

This is a rule which has been applied by most wildlife photographers.
The sharpness of the eye will capture the attention of your audience. Where a landscape photograph is taken of a shoreline, water level, coral reef or horizon, aim the horizontal line on one of the two horizontal lines provided by the rule of thirds.

Try and avoid placing the horizon in the middle of your picture. Look at the detail available above and below the horizontal line and move your camera up and down to get the best effect.

By applying the rule of thirds on the subject, more depth and dimension is provided in the photograph.
This is a powerful technique which will immediately improve the composition of your images. If you have forgotten about the rule of thirds at the time the photograph was taken, the rule of thirds can be established by making use of the crop tool on any photograph editing software.



Through the Lens
Photographer

Tom Hughes

Tom Hughes

A journey through the Lens

Tom Hughes

I started diving in Byron Bay in late 1982 and fell in love with it.

Working part time with a dive shop in Melbourne I became a FAUI Instructor in 1986.

Photography also became a big part of my diving back then and I started shooting with a Nikonos IV with a single Sea and Sea strobe.

I was an apprentice Aircraft Engineer back then and used to make all my own trays, arms and accessories as they were difficult to source and expensive!

Life and an aircraft engineering career took over in the nineties and early 2000's when I would only do the odd dive whilst on holiday with the family.

In 2015 circumstances changed and I was able to throw myself back in to diving. I renewed my instructor certification, this time with PADI and tentatively took up photography again with a gopro and a light or two.

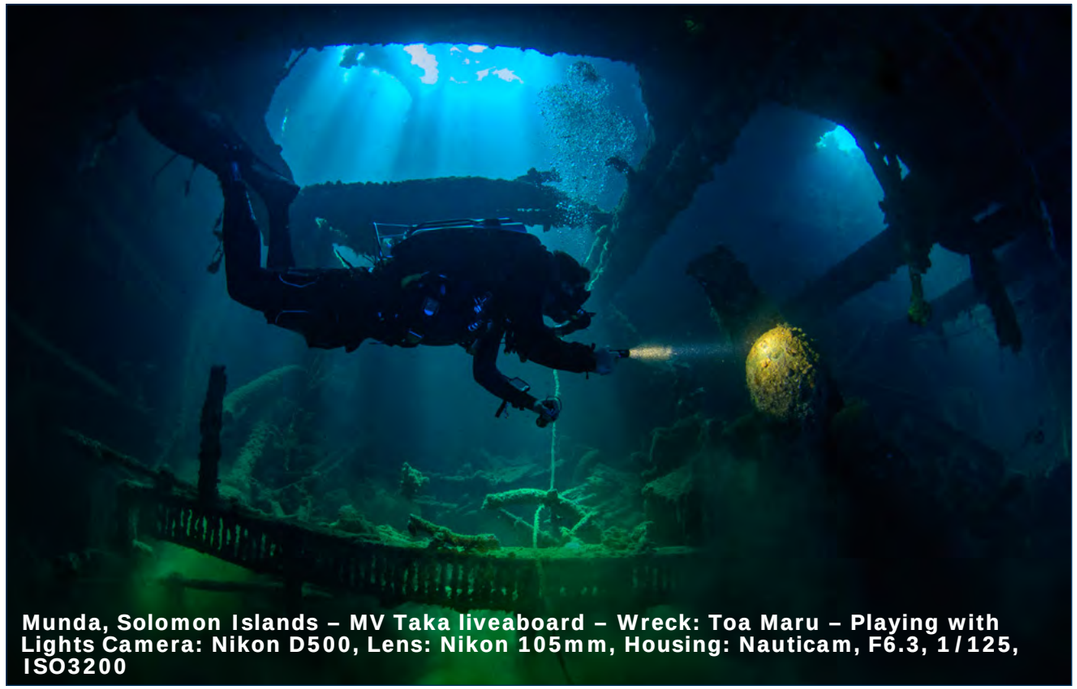
Digital photography was new to me but once I got the hang of it, I realised it had so many pluses over the old film days. So off I went.

A compact (various Sony RX100s) came first then into DSLRs with a Nikon D500 and now a Nikon D850.

I now live back in the Byron Bay area.

In early retirement I work at Sundive as Service Technician and Instructor spending all my spare time out at Julian Rocks with my camera and travelling (for diving of course) as much as I can.

Life is good……



Munda, Solomon Islands – MV Taka liveaboard – Wreck: Toa Maru – Playing with Lights Camera: Nikon D500, Lens: Nikon 105mm, Housing: Nauticam, F6.3, 1/125, ISO3200

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Julian Rocks, Byron Bay – Leopard Shark Season. Camera: Nikon D500, Lens: Tokina 10-17mm, Housing: Nauticam, Lights: Inon Z240 x 2 F11, 1/125, ISO200

South West Rocks – Wobbegong flyby Camera: Nikon D850, Lens: Nikon 8.0-15.0 mm, Housing: Nauticam, Lights: Inon Z330 x 2 F8, 1/125, ISO200

South West Rocks – Too many Grey Nurses – Never!!! Camera: Nikon D850, Lens: Nikon 8.0-15.0 mm, Housing: Nauticam, Lights: Inon Z330 x 2 F5.6, 1/125, ISO200

Kona, Hawaii – Manta Ballet – Manta night dive Camera: Nikon D850, Lens: Nikon 8.0-15.0 mm, Housing: Nauticam, Lights: Inon Z240 x 2 F6.3, 1/125, ISO400

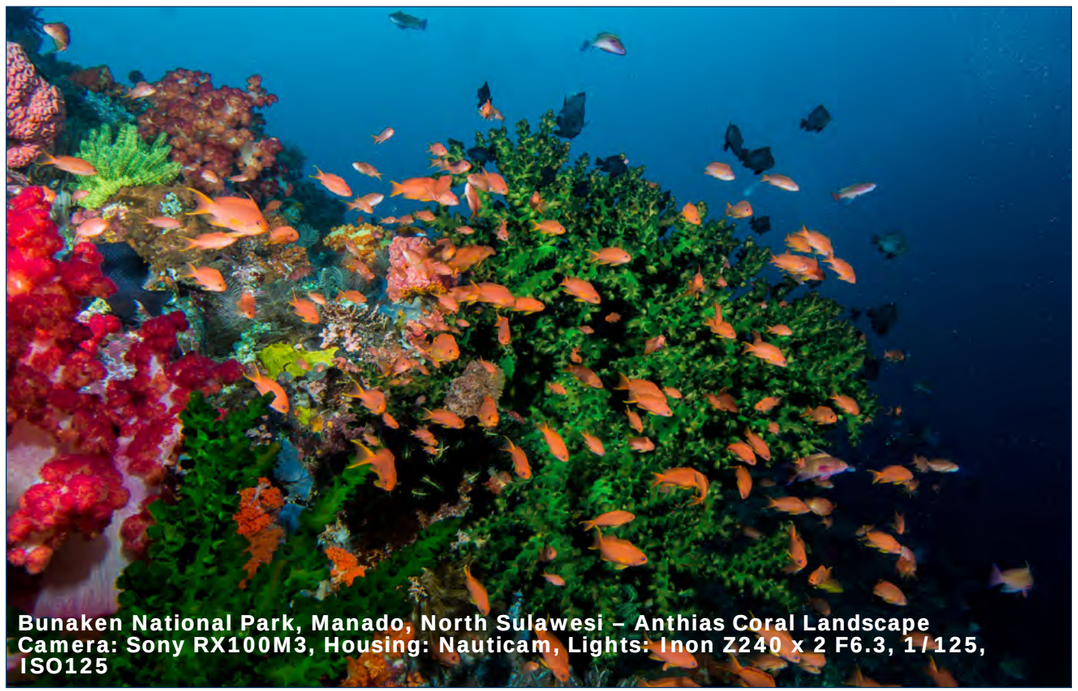
Tom Hughes

Munda, Solomon Islands – MV Taka liveaboard – Cuttle show Camera: Nikon D500, Lens: Tokina 10-17mm, Housing: Nauticam, Lights: Inon Z240 x 2 F8, 1/125, ISO200

Munda, Solomon Islands – MV Taka liveaboard – The Eyes Have It – Mantis Shrimp Camera: Nikon D500, Lens: Nikon 105mm, Housing: Nauticam, Lights: Inon Z240 x 2 F25, 1/125, ISO200

Tom Hughes

Bunaken National Park, Manado, North Sulawesi – Yawning Frog Fish Camera: Sony RX100M3, Housing: Nauticam, Lights: Inon Z240 x 2 F9, 1/125, ISO125

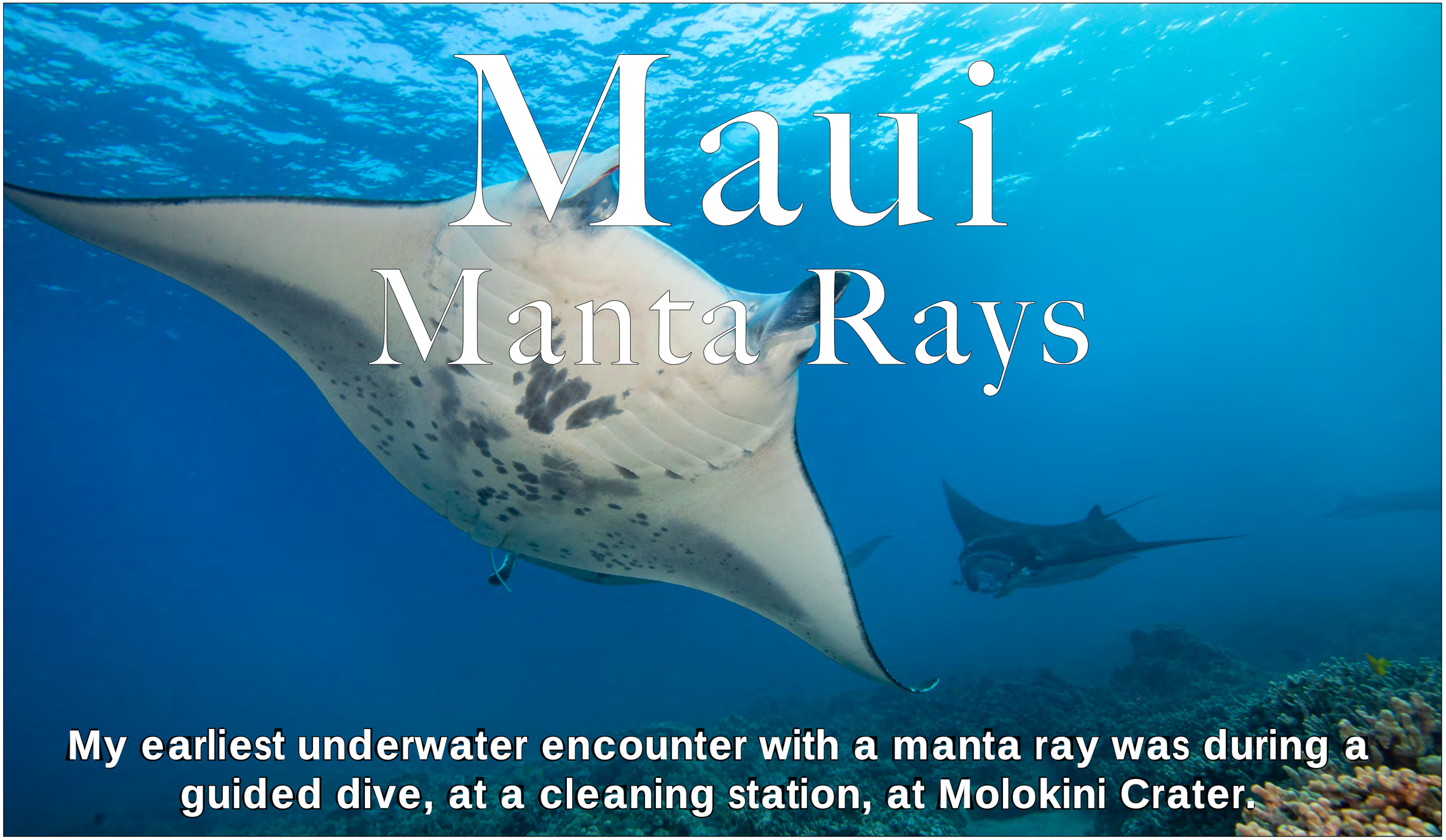


Bunaken National Park, Manado, North Sulawesi – Anthias Coral Landscape Camera: Sony RX100M3, Housing: Nauticam, Lights: Inon Z240 x 2 F6.3, 1/125, ISO125

Giant Stride
Manta Rays

By: David Fleetham

Maui Manta Rays



My earliest underwater encounter with a manta ray was during a guided dive, at a cleaning station, at Molokini Crater.

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SSI GREEN FINS SDI

Menjangan Island, Bali

By: David Fleetham

I initially spotted it heading my way as it effortlessly glided over a spot called “Reef’s End” above a series of coral heads. As it approached me, it somehow slowed down without even the slightest indication of change in its body, which left me puzzled as how the manta did this. Its enormous wings were barley moving. It appeared to be using some undiscovered force of motion.

I ascended slowly, cautiously pushing my camera unit in front of me inch by inch, and then I stopped allowing some distance between me and the creature.

I could see the small, endemic, Hawaiian cleaner wrasse who were already busy under the manta, moving in and out of its gill slits, which the gentle manta had kindly flared open to give these hard workers enough room to operate. Blacklip butterfly fish were also hard at work on the top of the manta, eating the small parasites, that were still big enough for me to see as they attempt to escape the cleaning process.

Since that first encounter, I have been lucky enough to have hundreds of other dives with these winged giants. But I will never forget that first experience. The first time you see a manta, you can never forget it. But despite these creatures’ size, they are somehow elusive.

I have met many well-travelled divers, with over 100 pages in their logbooks, that have yet to experience these magical creatures. I personally had over 500 dives before my first encounter. But most of my diving had occurred in British Columbia before moving here to Maui. Mantas do not inhabit cold waters. They can only be found in circumtropical oceans.

Mantas are scientifically grouped together with sharks and other rays. All these species share some common traits. They are cartilaginous, which

Giant Stride
Manta Rays

By: David Fleetham

means they do not have bones. A structure of cartilage throughout the animal constitutes what we would refer to as a skeleton.

Although they are closely related to stingrays and they have a similar tail, they do not possess the infamous "barbed spike" so they are unarmed. In fact, they do not even have teeth! But when the word shark is used, their scientific relative, we often think of teeth. Big teeth. This is unfortunate for mantas, and some sharks too.

Manta rays lost their teeth quite some time ago along the evolutionary trail. You can still see some evidence of this, with close examination of the manta's lower jaw, by the rows and rows of tiny dots that were once teeth, which now resemble a course sandpaper texture (as like some sharks).

Despite their immense size they are harmless. Mantas can reach over 22 feet across, exceed 3000 pounds, and feed strictly on a diet of plankton. The term "plankton" actually refers to a large list of tiny creatures that float about the ocean. This list includes mysid shrimp, copepods, all kinds of gelatinous organisms, coral spores, and the larvae of fish, mollusks, and crustaceans.

The mouth of the manta ray is located on the leading edge of the animal which makes them unique. Most rays are typically bottom feeders so their mouths, therefore, are on the bottom of their bodies.

As manta's feeding habits evolved, not only did their teeth turn into sandpaper, but their mouth moved to the front and became quite a large opening. On either side are large "flaps" called cephalic fins.

These amazing appendages evolved to aid as "mouth scoops" that maximize the intake volume of plankton-filled sea water. This adaptation for filter feeding is unique and gives the manta its iconic look.

Giant Stride
Manta Rays

By: David Fleetham

Once in the mouth, water passes over a set of filters that traps the plankton. Oxygen is also filtered at the same time, so this apparatus really works efficiently. The water then exits through five slits on the lower side of the manta. When not actively feeding, the manta can roll these cephalic fins into a tight cone to become more streamlined. These cones, or “horns,” are why mantas were first referred to as “Devil Rays.” In the past, this moniker wrongfully demonized them, and cast a less than likeable public perception, despite their toothless mouths and intensely docile nature.

So, by now you must be asking, “where can I see these creatures for myself?” Well, Mantas are still sporadically spotted at Molokini Crater, but these encounters tend to be seasonal. Additionally, they have been observed at most dive sites on Maui at some time or another. But for the largest number of mantas occurring together at one time on a regular basis, you will want to take a dive excursion in front of Ukumehame Valley off the coast of West Maui.

By: David Fleetham

Divers have observed long lines of mantas, one falling the next, numbering well over a dozen. These are commonly referred to as “trains” and are a precursor to mating. The first manta in line is a receptive female, while the remainder are all males hoping to end up in the right place at the right time. Mankind has similar rituals, that are often occurring most any night at many nightclubs and bars.

This same area off Ukumehame additionally has a shallow cleaning station where the mantas frequently line up to take turns having parasites removed. One will hover above a combination of cleaner wrasse and butterfly fish while several others will circle the area waiting for a turn.

While this is going on it is best for divers to approach the area slowly. Find a spot, correct your buoyancy, and then just hang there and wait. The mantas may initially leave, but they will be back. Like most marine life, mantas are quite cautious. But they will warm up quickly to divers that do not move around too quickly or make sudden gestures.

Despite their massive size, they move faster than you would think possible. Therefore it is wiser to allow them to approach you versus attempting to chase them. Initially, it took me a few encounters to figure this out, after ending up with dozens of images of just their tails.

The best shots I have are the result of waiting in a well-chosen spot and simply being patient. If you can time it correctly, try to avoid exhaling if one passes directly over your head. Bubble blowing is considered “bad manta manners.” Doing this results in the creature quickly departing.

Feeding has also been observed off Ukumehame and it often occurs quite close to the surface. When conditions are ideal, over a dozen mantas have been observed executing marvelous “aquabatic dance moves.” This is the result of an unusual amount of plankton concentrated in one place.

In order to consume as much as possible the mantas arch their backs and do repeated loop de loops. It is a remarkable sight. When this happens, it is hard to tell whom gets the better show; the divers from below or the snorkelers from above.

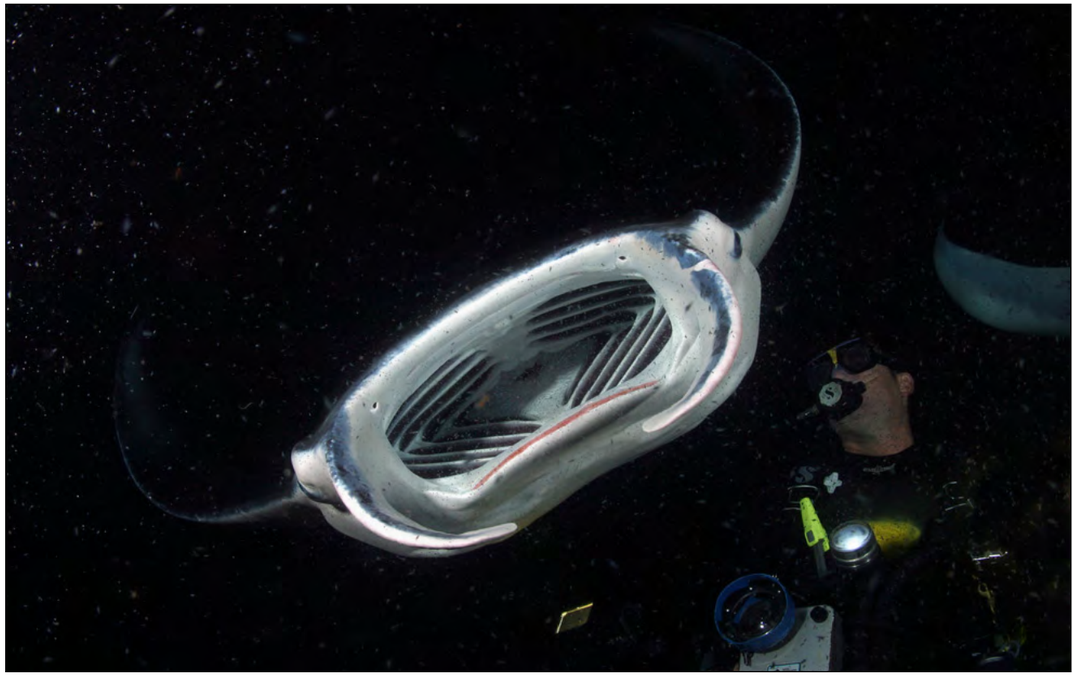
Here is one critical tip: if you are lucky enough to get up close and friendly, you must resist the urge to reach out and touch them. In the past, it was thought that a gentle rub on a manta was harmless. But through more research and better understanding, it was discovered that mantas actually have a thin mucus membrane over their skin that protects them from infections and disease. Disturbing this fragile membrane can cause them harm.

In the cartilaginous fishes containing sharks and rays, mantas have the largest brain in ratio to body mass. This is evident from just looking into their eyes. I often talk to them and tell them how marvelous they look.

I know it may sound silly, and yes, I am aware they can’t hear or understand me, but I am convinced it changes my body language and affects their perception of me. Before I did this “manta mantra” the time they lingered around me does not last as long as it does now. So try this the next time you dive with the mantas off Ukumehame.

For more information contact Maui Dive Shop at info@mauidiveshop.com or visit www.mauidiveshop.com

Giant Stride
Manta Rays



Giant Stride
Wakatobi

By: Wakatobi Resort

Wakatobi

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By: Wakatobi Resort

This might be the perfect dive vacation: Start with a visit to one of the world's most iconic dive resorts, where you explore pristine coral reefs while enjoying impeccable service, world-class dining, and first-class accommodations.

Next, you board a luxury dive yacht voyaging through the Banda Sea, visiting underwater landscapes known only to a few while enjoying the same exemplary level of services and amenities. This double dip of exceptional underwater experiences and topside relaxation is available exclusively to guests of Wakatobi Resort.

IT BEGINS IN BALI

Wakatobi is the epitome of "away from it all." This idyllic beachfront resort sits on a small island in the waters of Indonesia's Banda Sea, far removed from the everyday.

But though remote, it's surprisingly easy to reach by way of the resort's direct guest flights and concierge-style transfer services.

When guests touch down at Bali's international airport, they are met by Wakatobi representatives, who take care of all the details of arrival, transfers, and overnight layovers. The Wakatobi team can also help to schedule accommodations and excursions for guests who want to spend a few extra days in Bali before heading on the Wakatobi. On the morning of the flight to Wakatobi, guests wait in a VIP lounge before boarding a large, 70-seat aircraft for a comfortable flight to Wakatobi's airstrip.

RESORT RELAXATIONS AND EXCEPTIONAL DIVING

Wakatobi Resort is located within a private marine preserve that is home to some of the most pristine and bio-diverse coral reefs on the planet. Directly off the beach is the House Reef, which has been named the world's best shore dive.

Divers and snorkelers can explore this vast underwater garden day and night. Each day, a fleet of spacious, custom-built dive boats provide exclusive access to more than three dozen exceptional diving and snorkeling sites. Attentive dive guides provide personalized service at the dive center, on the boats and under the water.

Ashore, guests can relax in traditionally styled bungalows set in an oceanfront palm grove or take in sunset views from the deck of a waterfront villa.

Accommodations blend timeless Indonesian charm with modern comforts to provide a relaxing vacation experience. Topside activities include water sports, spa services and activities such as island tours and Indonesian cooking demonstrations.

Giant Stride
Wakatobi

By: Wakatobi Resort

Wakatobi is known for providing the highest levels of personal service, and for its cuisine. The resort's talented culinary team elevates the dining experience to gourmet levels, serving a tempting mix of international favorites and regional offerings, along with bespoke offerings for those with special dietary requests.

The staff can create a private candlelight dining experience on the beach or prepare a special picnic lunch. The resort offers a range of additional services such as private dive and snorkel guides or all-day charters on a private boat.

A DIFFERENT KIND OF LIVEABOARD

The perfect complement to a stay at Wakatobi Resort is a trip aboard the Pelagian. Seen from afar, this gleaming-white 35-meter vessel might seem like one of the private pleasure ships that line the quays of glamorous ports such as San Tropez or Newport.

And unlike most liveaboard dive boats, Pelagian doesn't cater to the masses, and is configured to take a maximum of just ten guests. This allows for comfortable yacht-like accommodations more akin to a hotel room than a cramped cabin. The crew of twelve includes an executive chef and stewards, which allows for a fine dining experience and five-star service.

But though its spacious cabins and social areas showcase an upscale yacht interior, the Pelagian is very much a dive boat. The vessel cruises a broad swath of the Wakatobi archipelago and ventures to the southern portion of Buton Island.

Seven-day itineraries and seasonal 10-day trips take in a diverse range of underwater environments, from the walls of Karang Kaledupa and Karang Kapota to the exceptional muck diving opportunities of Buton Island's Pasarwajo Bay.

The Pelagian's route also skirts the southwestern edges of Wangi Wangi and Kaledupa Islands, providing another round of magnificent reefs, dramatic vertical drop-offs and pinnacles, each revealing a kaleidoscopic menagerie of marine life.

Diving activities are conducted from a pair of custom-fabricated dive tenders, with the crew handling all gear management. Dives are led by one of Wakatobi's experienced guides, who provide in-water support when requested or needed and are experts at locating rare marine subjects. Because dives are conducted either in shallow-water muck sites or on structures with significant vertical reliefs that are ideal for multi-level profiles, bottoms times routinely exceed 70 minutes, and the schedule allows for up to four dives a day, including night dives.

MAKING THE CONNECTION

Because all Pelagian cruises begin and end at Wakatobi Resort, connecting land and sea itineraries is easy. Flights from Bali typically arrive at the resort before noon, giving resort guests ample time to enjoy lunch, settle in and get in their first dive of the trip before dinner.

Divers who are scheduled to go directly aboard Pelagian also have the chance to relax and enjoy lunch at the beachfront dining room while the staff transfers luggage and dive gear to cabins and lockers.

By early afternoon, all is in place and the Pelagian departs for a local reef, where guests can perform a checkout dive to ensure all is in order. But even this first dive often stretches to 70 minutes or more, setting the tone for the week to come.

"Very high standards are just the norm on Pelagian. The diving was breathtaking, the crew are simply awesome, the food and service exceed expectations every time. I will certainly be booking another trip very soon!"
~ Simon Bowen, October 2022

When Pelagian arrives back at Wakatobi's dock at the end of each cruise, departing guests are free to relax and enjoy the resort's amenities before catching the afternoon flight.

Guests transferring to the resort can keep racking up bottom time by hopping on a late-morning or afternoon boat or making a dive on the House Reef. For all these transfers, guests never need to bother with transferring luggage or equipment, as Wakatobi's staff handles all the details, removing the hassles of travel and leaving only the relaxation.

Want to create your own Wakatobi Double Dip vacation experience? To start planning, visit wakatobi.com where you can complete a quick trip inquiry, or e-mail Robert Parrington at robert.parrington@wakatobi.com.

By: Kurt Storms

Salem Express

The Salem Express was launched in France in June 1965 under the name 'Fred Scamaroni' a member of the French resistance of WWII.

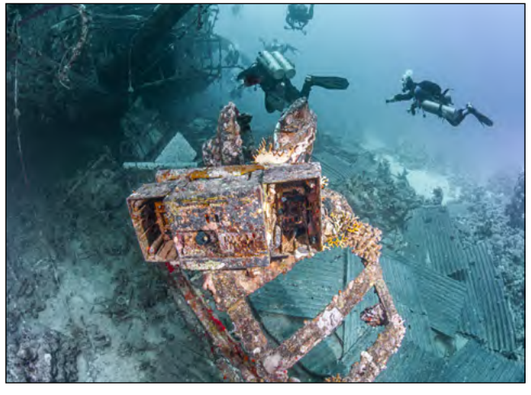
Wreck : Salem Express
Location : Egypte (Safaga)
Coordinates : N 26 38.375, E 34 3.695

The owner of the ship was The Compagnie Generale Transatlantique. She was a roll-on, Roll-off Ferry for vehicles and passengers in the Mediterranean.

In June 1966 , it began sailing its first route between Marseille- Ajaccio after being delayed for a fire in the engine room. The Ship was 115m Long and 18m Wide. She was sold in 1988 to the Samatour shipping company and started running trips between Safaga and Jeddah under the name 'Salem Express'

In 1991 she began sailing her usual 450 mile journey from Jeddah, Saudi Arabia to Safaga,Egypt.

The Trip would take about 36 hours, They intended to unload 350 passengers in Safaga before they heading to Suez. This route was a standard schedule since 1988. However, the ship's departure was delayed for 2 days in Saudi Arabia because of a mechanical fault.



On the 14th of December 1991 she was returning from Jeddah with hundreds of pilgrims ho had just been to Mecca. A storm was blowing gale force and the people on the outer decks were getting drenched, So the captain decided to stay close to the shore to shave time of the journey, instead of the longer route along the outer reefs. Unfortunately, the captain misjudged their position, and at 11:31pm she ran out an outer pinnacle of Hyndman Reef. The result was Disastrous

Not only was water coming in from a hole in the starboard side, but the impact was hard, the impact caused that the bow loading door to open, letting thousand of liters of water in. Almost immediately the ferry started to list over to the starboard side, making it impossible for the crew to deploy any of the lifeboats.

The Salem express under the command of Captain Hassan Moro, who had the command from 1988, sank within 20 minutes of hitting the reef. Manny people died trapped inside the wreck. Because there was a hard storm and the fact the tragedy occurred more than a hour from the port in the middle of the night, rescue boats arrived much to late. More than 180 of the survivors had to swim to the shore. Loss of life was Considerable, with the official figure being quoted as 464.

Rumor suggest that the ship was overload and that the death toll was closer to 1200. Many bodies were recovered after the sinking, but eventually a halt was called due to the danger involved and that the wreck was sealed with plates welded across openings.

The first survivor Ismail Abdul Hassan, who was an amateur long-distance swimmer who worked as an agricultural engineer, stood on the ship's deck as it went down. He followed the lights of the port and swam to shore, surviving 18 hours int the water. He attended to lead two other men to safety, who held onto his clothes, but died f exhaustion on the way.

By: Kurt Storms

Diving The Salem Express

We reach the wreck by a decent line. She is lying on its port side and make our way around the stern to the back, where we now have a good visibility on the 2 propellers. They are giants. Between the propellers we see the rudder.

After taking some pictures we go to the decks, and we see the lifeboats on 30m of depth. In the past there where 2 lifeboats on the bottom. But now there is only one left. Nobody knows where the second on is.

I like wrecks, but I don't like lifeboats on the bottom of the ocean. Lifeboats are supposed to carry people when the ship sinks, and bring them in safety, and they can't do that when they're on the bottom.

At the back of the ship, I see on the bottom of the ocean, a television, radio. People who dived the Salem Express before me, they had to put it like this, because this is not a natural movement.

We go further to the front and see the big exhausts. on the side you see the logo of Salem Express. The Exhaust are full of live. Lots of corral grows in the years the ship has sunk.

Further to the front you come to the captain's deck. I penetrate it, and I come in the room of the captain, his bad. There is not lots of instruments anymore. I go up and I find my exit by a door on the side.

I continue my way, via port side, and enter the cargo zone via an open hatch.
I descend here and penetrate via this road into the corridors of the ship, here one can still find remnants of cars.

It is still grim, knowing that many lives were lost in this tragic accident.
On the way, I come across a few wheelbarrows with mattresses in them, suitcases.

From afar I suddenly see the light penetrating back into the wreckage.
After emerging from the wreckage, I now look for a way to the restaurant.
I go through an opening in the restaurant. adopt a stable position, so that I can also take some photos here.

The tables are still standing, but the upholstery has deteriorated bit by bit over the years.

Now it's time to say goodbye to this beautiful wreck and do my decompression duties.

these are not so big, this is because I did the dive on my Divesoft Liberty SM rebreather, so the decompression obligations are drastically less compared to traditional diving

Once back on the boat, everyone is quiet for a moment. They all think it is a beautiful wreck, but because of the history, the dead, it will always remain a cemetery and we must show the necessary respect.

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Tech Talk

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Photo By: Nuno Gomes

Nuno Gomes

Nitrogen narcosis is the complex effect that dissolved nitrogen gas has on the human body. When the body is exposed to this gas during a dive (under a higher pressure than ambient), nitrogen narcosis manifests. The effect is thought to be physical rather than chemical.
The effects start when a diver (using compressed air 21% O2 and 79% N2) goes 1 metre deep. Most divers think that nitrogen narcosis only starts at 30 m, but this is incorrect (the effect is normally only appreciable at 30 metres or more). At shallower depths, the effects are much less and divers are just not aware of it. Nitrogen narcosis is dangerous because it impairs the diver's judgment and it slows one's ability to think clearly and logically. It is like drinking and driving – not a good idea.

It is thought that for every 10 m descended the diver will feel as if he or she has had one martini on an empty stomach. At 30 m the diver would have had three martinis, so the effect will almost certainly be felt!
So how does nitrogen narcosis work? No one knows exactly, but there are many theories. The most accepted theory is that nitrogen dissolved in the blood during a dive is carried to the nerves in the body, blocking the passage of nerve signals (electrical impulses) to the brain. As a diver goes deeper, more and more nitrogen is dissolved in the nervous system and the effect increases.
Nitrogen is quite a dense inert gas and when nitrogen is substituted with a less dense inert gas, such as helium, the narcosis effect decreases.
Don't get too narked!

Barry Coleman

Nitrogen narcosis is a dangerous condition that can affect scuba divers, especially when diving deeper than 30 m, or on a nitrogen partial pressure of 3.2 bar. At depths of 90 metres or nitrogen partial pressure of 8 bar, nitrogen narcosis leads to hallucinations and even unconsciousness. The exact mechanisms behind nitrogen narcosis are still to be explored, but it has to do with nitrogen gas affecting the nerve transmissions in the body during high pressure.
The effects of nitrogen narcosis are similar to that of anaesthetic gas or alcohol. It can be hard for the affected diver to realise that he or she is developing nitrogen narcosis, since the level of intoxication will increase gradually.

The most dangerous aspects of narcosis are the loss of decision-making ability, loss of focus, and impaired judgment and coordination. The diver may start to feel invulnerable and may disregard normal safe diving practices. Other symptoms include vertigo, tingling and numbness of the lips, mouth and fingers, and extreme exhaustion. Affected divers may also panic and sometimes remain on the bottom, too exhausted to ascend. The syndrome may also cause exhilaration, giddiness, extreme anxiety, depression and paranoia.

Although narcosis is most commonly reported below 30 meters, there is no reliable method to predict the severity of its effect on an individual diver. It depends on many factors, with variations between individuals. Excellent cardiovascular health is no protection and poor health is not necessarily a predictor. Cold, stress, heavy work, fatigue and carbon dioxide retention all increase the risk and severity of nitrogen narcosis.
Though some divers seem to be able to cope with the symptoms and even claim to be less susceptible than others, tests have shown that all divers are affected by nitrogen narcosis. Some divers may cope better than others due to acclimation, training or special breathing techniques, but the effects remain. And that is why nitrogen narcosis is dangerous.

Pieter Smith

Nitrogen narcosis, or 'narcs' as it is known, affects all divers diving on air deeper than 30 m in seawater. It is a change in the function of the nervous system, affecting a diver's behaviour mainly in the following ways:
Subjective sensations - Divers experience sensations like intoxication (drunkenness), overconfidence, euphoria, anxiousness, different levels of consciousness and an impaired ability to perform tasks. The diver's ability to deal with these sensations makes the difference in how one diver to the next will handle the effects.
Impaired cognitive function - Narcosis influences function in brain processes such as your perception, what you think, what you remember etcetera.
Slowed mental activity - Narcosis reduces the speed at which you react or execute a certain function underwater. The deeper you go, the worse it gets (with unconsciousness a real threat from 90 m). You become slow and disorientated, but also overconfident – indeed a very dangerous combination.

Thermo control - Normally, the deeper you go the colder it gets. Your body's natural reaction is to start shivering in order to produce more heat as a defence against the cold. With narcs being present, your body does not shiver (because the nervous system is affected), resulting in your core temperature dropping faster than normal, which could lead to hypothermia. That is why you are never that cold down in Wondergat, but the deco stops are a killer!
Every diver experience narcosis from 30 m onwards. Regular exposure to it does reduce subjective sensations, thereby resulting in an increased ability to function.

Pieter Venter

Nitrogen narcosis is a physical phenomenon and you cannot build a resistance to it – you can only get used to it as you build up dives. Gases, especially fat-loving ones under pressure, infuse the fatty tissue surrounding nerves and squeeze it (senseless in some cases). You cannot train your fatty tissues to resist these gases. Typical gases include anaesthetic gases with a high narcotic effect, with nitrogen requiring a few bars pressure before narcosis is noticeable. Stress, physical exercise, cold, low energy levels and other factors magnify the effects of narcosis. Getting narked is being on your way to being anaesthetised. It goes without saying that being anaesthetised deep under water is dangerous.

Narcosis is the flame of a candle. Unfortunately, most deep divers are like moths attracted to a flame. The allure and challenges of deep air dives are irresistible to some. Most technical or deep divers I know – me included – went through a dangerous stage of 'done a few courses, have the equipment and will push depth on air'. Deep air dives are enjoyable and can become an end in itself at that stage. Fortunately, with experience, your mindset changes to deep diving preferably on Trimix, which is a means to an end rather than an end in itself.

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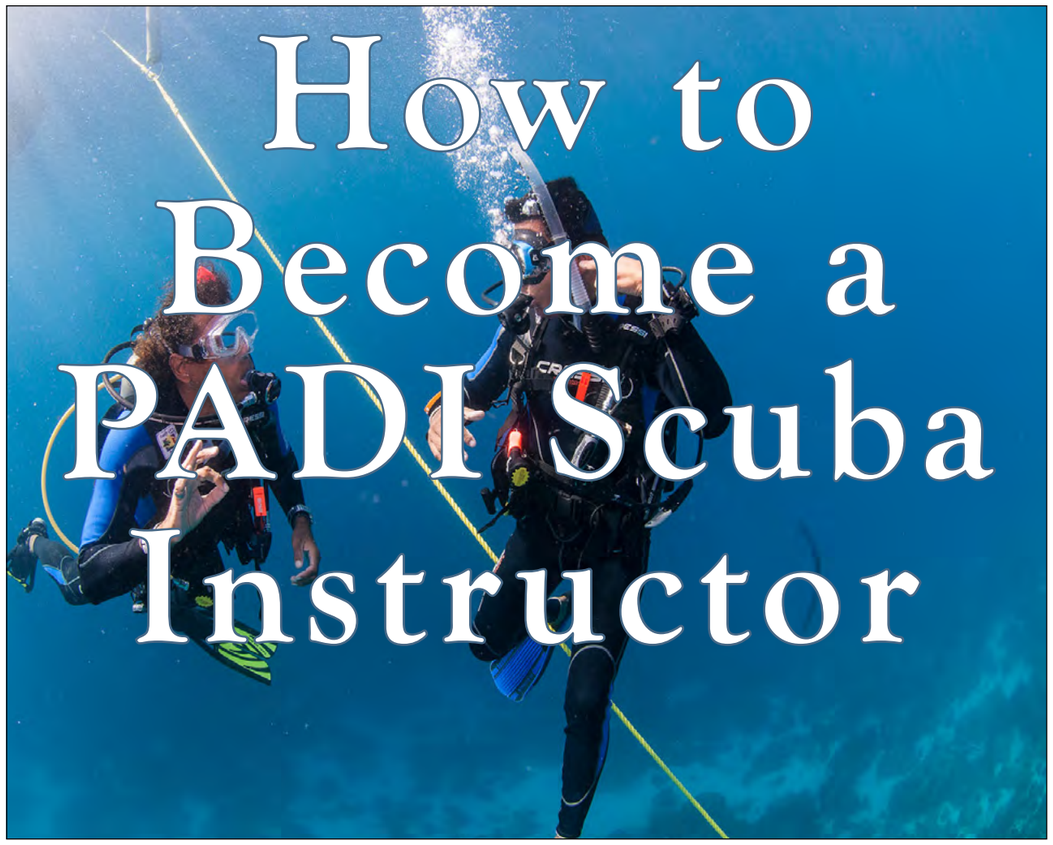
THALASSA

5★ PADI DIVE RESORTS INDONESIA

By: PADI

How to Become a PADI Scuba Instructor



If you love sharing your passion for the underwater world and want to live an extraordinary life, why not become a scuba instructor? It's one of the most rewarding full-time or part-time jobs you can have.

Quite honestly, I'm a bit upset 'scuba instructor' does not commonly appear on the list of things you can be when you grow up.

With all due respect to doctors, lawyers and firefighters, scuba instructors transform lives and play a vital role in environmental conservation.

Read on to learn how you can have a meaningful career, travel the world and make the most of your time on this ocean planet – as a PADI® Scuba Instructor.

Steps to Become a PADI Instructor
The PADI IDC (Instructor Development Course) is the most recognized scuba diving instructor course in the world.

The majority of the world's most successful dive instructors gained the knowledge, skills and confidence required to start teaching scuba during their PADI dive instructor course.
In post-course surveys, 95% of student divers say they would highly recommend their PADI Instructor.

Step One: Meet the IDC Prerequisites
The first step to becoming a scuba instructor is enrolling in an IDC. To start your dive instructor training you must be at least 18 years old and meet the following requirements:
• Be a certified diver for at least six months
• Hold a PADI Divemaster certification (or qualifying certification)
• Have at least 60 logged dives
• Hold a current CPR and First Aid certification*
• Have an in-date medical approval to scuba dive
* IDC candidates must have a current (within the last 24 months) Emergency First Response (EFR®) certification or hold a qualifying certification.

EFR Instructor certification is required before you can start teaching. How many dives do you need to become an instructor?

You only need 60 logged dives to enroll in a PADI IDC; 100 logged dives are required to receive your Instructor credential.

Step Two: Complete the IDC
The PADI IDC has two components:

Assistant Instructor (AI) and Open Water Scuba Instructor (OWSI).

You can complete them separately or all in one go.

As the name implies, the focus of the Instructor Development Course is learning how to teach, not perfecting your skills.

By the time you start the IDC, you should already have excellent diving skills and professional-level knowledge of diving equipment, physics and physiology. In the IDC, you'll learn how to share your knowledge and experience with others.

By: PADI

During the IDC you'll learn:
• How to give classroom presentations
• How to work with students in confined water (a pool or pool-like environment) and open water
• PADI's 4E's philosophy
• Risk management
• How to market yourself as an Instructor

By the end of your PADI IDC, you'll have the knowledge, skills and confidence to train scuba divers through all of PADI's core recreational level courses as well as several specialties.

Here's something most people don't realize about becoming a scuba instructor: the things you learn in the IDC are helpful in other areas of life.

In the PADI IDC, you'll learn how to explain complex ideas, give constructive criticism in a positive manner and improve your confidence in public speaking.

How hard is it to become a dive instructor?
Different parts of the IDC will be easy for some and challenging for others. For example, the classroom presentations were easy for me.

I'm comfortable speaking in front of people and PADI's Guide to Teaching outlines everything you need to say. But others in my class were nervous and had a hard time at first. Meanwhile, I stressed out about the rescue exercise while other candidates (with long arms, I might add) completed it effortlessly every time.

It should also be noted that I started my IDC less than a year after I became a Divemaster. My skills were pretty sharp and I had only forgotten about half of my dive theory (oops!).
Other IDC students hadn't been active Divemasters for years. For them, the learning curve was a little steeper. The good news is: PADI is known for its high-quality instructional curriculum

designed to accommodate students at various levels with different learning styles. It's one of the main reasons the majority of dive instructors are PADI Instructors. Furthermore, PADI's Instructor Trainers (known as Course Directors) are some of the dive industry's most experienced and elite instructors.

Everyone is different and some parts of the IDC will be easy for some and challenging for others.
• By choosing PADI, you set yourself up for success.
• If it's been more than a year or two since you became a Divemaster or assisted with classes, tell your Course Director. They might offer an IDC prep course or recommend ways to prepare for the IDC.

Step Three: Pass the Instructor Exam
After successfully completing the IDC, you'll be eligible to take the PADI Instructor Exam (IE). Instructor Exams are conducted by PADI Examiners, friendly, experienced Course Directors who work for PADI.

Examiners follow standardized criteria to ensure instructor candidates have the knowledge and skills to become safe, effective scuba instructors.

These independent evaluators ensure the evaluation process is objective, fair and consistent worldwide.
Once you're a PADI Instructor, you can apply for jobs on PADI's international Job Board and enjoy other benefits of PADI Membership.

How long does it take to become a dive Instructor?
If you meet all prerequisites, you can complete the PADI IDC in as little as 10-14 days. Not every IDC Center offers a consecutive day program, so be sure to inquire.

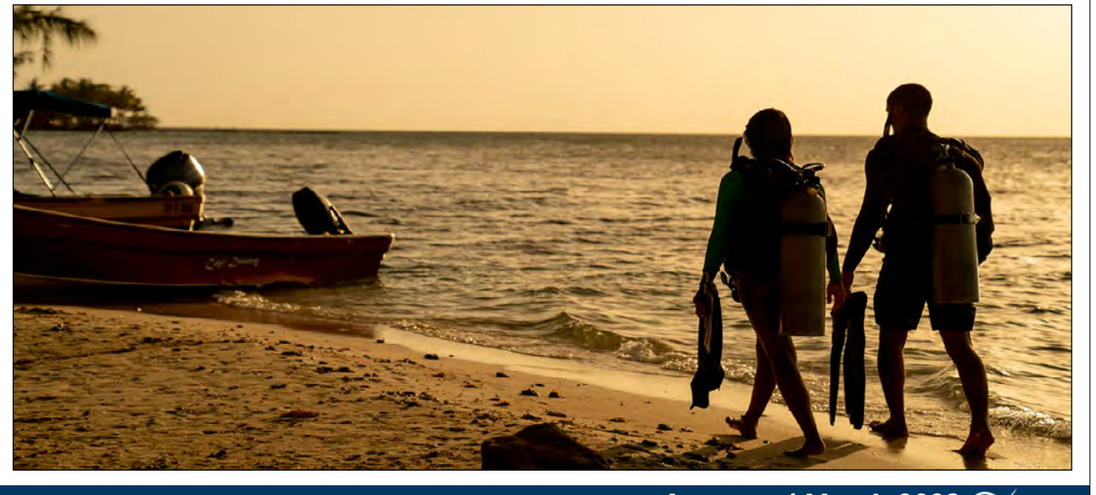
Prefer to take your time? Many IDC Centers scheduled scuba instructor training over the course of several weekends. Learn more about choosing the best place to do your IDC.

Step Four: Find Work (or not!)
PADI dive instructors are in demand – not just for teaching scuba classes.

Check out the PADI Job Board to see the many scuba instructor jobs available around the world, or read this list of nine scuba diving jobs you may not have considered.

It's also totally fine to become a scuba instructor just so you can teach friends or family members to dive.

You don't have to quit your job and travel the world; but once you're a scuba instructor, that option is always available.



By: Johan Boshoff

Basic Overview of Rebreathers:

Rebreathers are more gas efficient than open circuit systems. Generally the gas breathed is the optimum or best mix (mixture of nitrogen and oxygen) and warmer to breathe, which provides longer bottom times/dive time. They are not as noisy as open circuit (blowing lots of bubbles!).

Although we say rebreather, it is a generalisation covering a range of equipment that has two common similarities: the exhaled gas is re-circulated within a breathing loop and the carbon dioxide is removed by an absorbent. The closed circuit rebreather will attempt to provide the best nitrox/ean for the depth.

Normal air open circuit scuba is not the best mix of gas for scuba because the fraction of oxygen is only 21%. This fraction does not change; the partial pressure of oxygen (PpO2) will change according to the depth.

The 'best mix' in recreational diving generally has a higher PpO2, from a tissue loading and non decompression perspective.

The best mix would be able to keep the PpO2 fixed and adjust the fraction of oxygen according to depth. The rebreather has a controller with a 'Set Point' which can control the PpO2.

The Set Point is a predetermined figure calculated on what the oxygen partial pressure should be at a given depth. The oxygen controller attempts to maintain the partial pressure of oxygen (PpO2) in the breathing loop to match within say 0.02 bar of the Set Point. Therefore the fraction of oxygen within the loop will change to maintain the same PpO2 and the Set Point. The amount of oxygen in the breathing loop is supplied via the solenoid in an electronic controlled system or via a manually operated valve.

The solenoid is an electronic valve which allows a small amount of oxygen gas to be added when activated by the electronic controller. Oxygen sensors, if fitted within the breathing loop, will provide information (with the help of electronics) on the partial pressure of oxygen (PpO2) via a visual display.

The oxygen sensors work on a chemical process converted into an electrical current which in turn is interpreted by a computer which may then control the solenoid and flow of oxygen or the diver is required to manually add oxygen to the loop. In some more advanced electronic systems a dive computer is integrated and calculates the NDL and other limits.There are a wide range of rebreather designs and we will briefly look at some of them:

Oxygen rebreathers

These are mainly used by the military. They are limited on the depth they can be dived, because they use pure oxygen in the breathing loop, and as you may have already learnt, 100% oxygen becomes toxic below 6m/20 feet. They are small and not common at all in recreational diving. These units do not have oxygen sensors.

Semi Closed rebreathers

Semi Closed Rebreathers use a constant flow of premixed gas through a control orifice into the breathing loop. The excess gas not used is vented from the loop. Hence the term 'semi closed'.

The size or diameter of the orifice must match the depth range where the diver will be using the unit.

Too small and the volume of supplied gas will not be enough and too large and the volume will be excessive and waste gas.

There are two types of Semi Closed rebreathers; Passive and Active. The Passive system will deliver gas into the breathing loop when triggered or activated due to the reduction of loop volume.

As the breathing loop volume reduces from the diver's metabolism, the reduction activates a valve which opens and adds a pre-mixed gas to the breathing loop. This system generally reduces the amount of excess gas the unit

vents. The Active system delivers a constant flow of gas into the breathing loop and has a higher amount of gas volume venting.

These units may have oxygen sensors, but they are not required, as the PpO2 can be calculated and estimation figures based on depth, workload and metabolic rate projected for decompression purposes.

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The Dive Spots of NEW SOUTH WALES

The Dive Spots of New South Wales is an indispensable guide for all levels of divers and snorkeler, broadening their horizons on places to visit and dive/snorkel in New South Wales.

Through extensive travel and diving, Johan Boshoff and Graham Willis bring you valuable information on more than 250 dive spots in New South Wales.

Important guidelines on each coastal dive destination include accommodation, facilities, travelling tips and dive conditions. Complete with photographs and more than 100 illustrated maps of each dive site.

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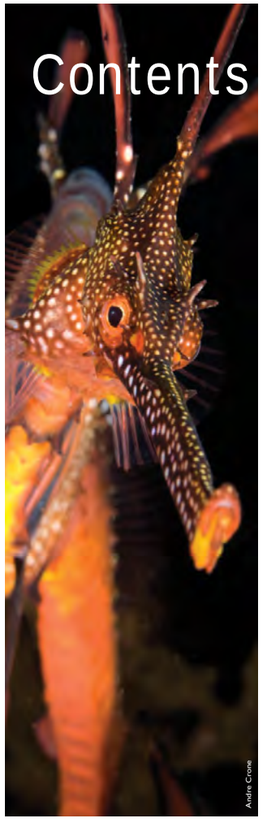


GENERAL

NORTH COAST

CENTRAL COAST

SYDNEY & SURROUNDINGS

Northern Beaches

Sydney Harbour

Southern Beaches

SOUTH COAST

Marine Species Guide

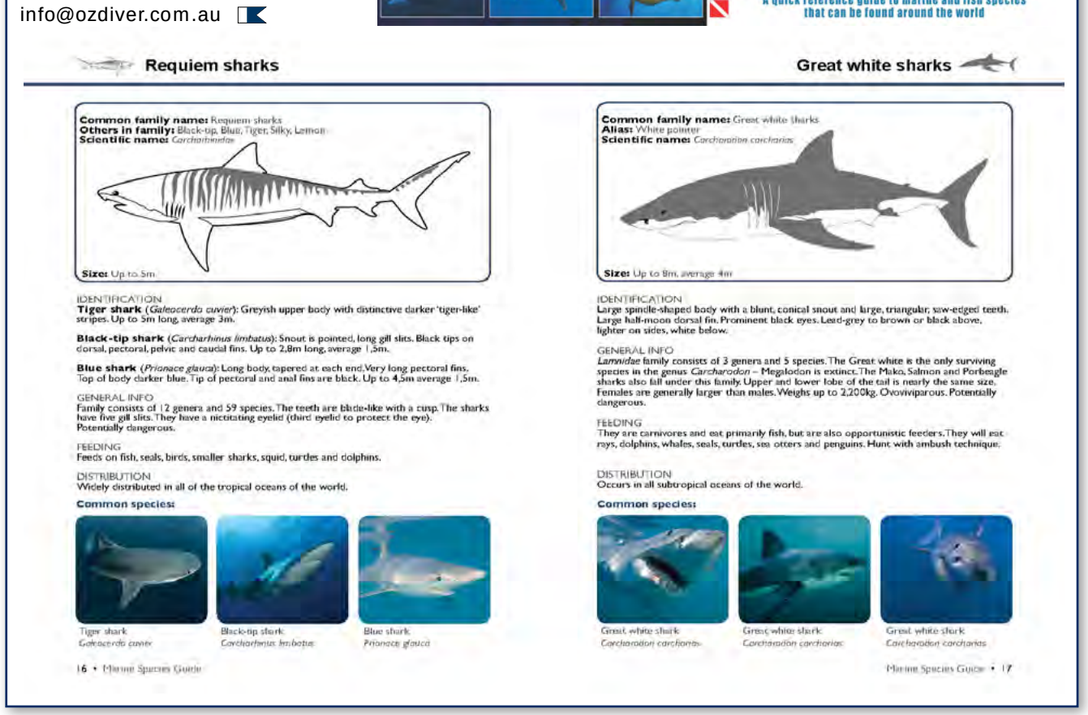
This book can be used by scuba divers and snorkelers as a quick reference guide to help them identify and learn about the fish species they might encounter underwater.

The book covers many of the marine species found on the reefs around the world. Illustrations of fish families simplify identification underwater, while general behaviour of the family and interesting facts are also listed.

This information includes the common family names, biological family names, aliases, size, identification, general information, feeding preferences and where the families occur around the world.

Photographs of the most common of the species found, when scuba diving or snorkeling, are included and the fish families are categorised for easy reference.

To buy your copy for $ 25, visit www.ozdiver.com.au or email info@ozdiver.com.au



Scubapro A2 Dive Computer

There is a saying "big things come in small packages" and that is what the Scubapro A2 Dive Computer is: a big computer in a small housing. I always fancied small dive computers and when it was time for an upgrade, I found exactly what I needed.

By Johan Boshoff

I needed a watch type computer that did everything I wanted it to do. I was looking for a dive computer for recreational scuba diving but that could also be used for my technical diving and the Scubapro A2 Dive Computer offered everything. From recreational diving to full technical diving and it even works for my rebreather.

The Scubapro A2 Dive Computer is a fully functional wristwatch-style dive computer with a high-resolution, hybrid matrix display with large numbers, making it easy to read underwater, even in adverse conditions, and even easier to use and navigate.

You can choose from six dive modes: Scuba, Gauge, Freediving, Trimix, Sidemount and CCR. Its Predictive Multi-Gas algorithm can accommodate up to eight gases (21-100% O2) plus two in CCR mode. The digital tilt-compensated compass provides easy navigation underwater or on the surface. And when the diving is done, cord-free connectivity using a Bluetooth LE interface lets you easily sync with a PC, Mac, Android or iPhone, for data downloading and more.
The A2 has wireless air integration which can handle multiple transmitters while monitoring tank pressure and providing true remaining bottom time based on a diver's workload from breathing. An optional heart-rate monitor belt allows the A2 to record heartbeat and skin temperature, providing even more vital, individualized information that can be factored into your decompression calculation.

Features
•Wireless air-integration can handle multiple transmitters, monitor tank pressure and provide true remaining bottom time (RBT) calculations based on the workload from breathing
•Digital tilt-compensated 3D compass allows for easy navigation
•Predictive Multi-Gas ZH-L16 ADT MB algorithm accommodates eight gases (21-100% O2) plus two in CCR mode
•PDIS (Profile Dependent Intermediate Stops) calculates an intermediate stop based on N2 loading, current and previous dives and breathing mixes for better diving
•Microbubble levels let you adjust the level of conservatism in the algorithm to match your experience level, age and physical conditioning
•Heart rate monitor records heartbeat and skin temperature (with SCUBAPRO HRM Belt only) that can be factored into the decompression calculation along with workload
•Multiple Dive modes: Scuba, Gauge, Apnea, Trimix, Sidemount, CCR
•Sport mode offers sport-related functions like a swim stroke counter, activity counter (pedometer) and stopwatch
•High-resolution hybrid matrix display with large numbers is easy to read under water, even in adverse conditions
•Intuitive menu and four button controls make it easy to navigate through the system
•Lightweight design is so comfortable on the wrist you won't want to take it off
•Modern design with full watch functions is perfect for topside time-keeping as well as underwater data tracking
•Max Operating Depth: 394ft/120m
•Bluetooth Low Energy interface lets you download dives to any iOS or Android device or PC/Mac
•Firmware can be user-updated by going to scubapro.com
•CR2450 battery is rated for up to two years/300 dives
•Included: Protection foil, Quick Card, Arm Strap Extension, Read First (user manual is available online).
Optional equipment: Transmitter and heart rate belt

If watch type dive computers is your thing, then this one is for you.

A DIVER'S GUIDE TO THE WORLD

Over the course of 14 months, National Geographic dive travel experts Carrie Miller and Chris Taylor traveled to 50 inspirational locations around the world, spending more than 250 hours underwater, to create their one-of-a-kind guidebook: A DIVER'S GUIDE TO THE WORLD: Remarkable Dive Travel Destinations Above and Beneath the Surface.

This book was born from love—a love of travel and a love of the ocean, the phantasmagorical blue expanse that covers more than 70 percent of our planet's surface, unexplored and unprotected, mysterious and magical.

Although the land and sea are wonderfully and inextricably interconnected, travelers tend to visit one or the other. Scuba divers seek out underwater realms, impatiently counting down surface intervals until their next dive. Land-lovers might venture out for a snorkel or sail, but they're glimpsing only a pixel of the bigger picture. Exploring both underwater and on land is the most holistic way of experiencing a destination and the interconnectedness between the green and blue.

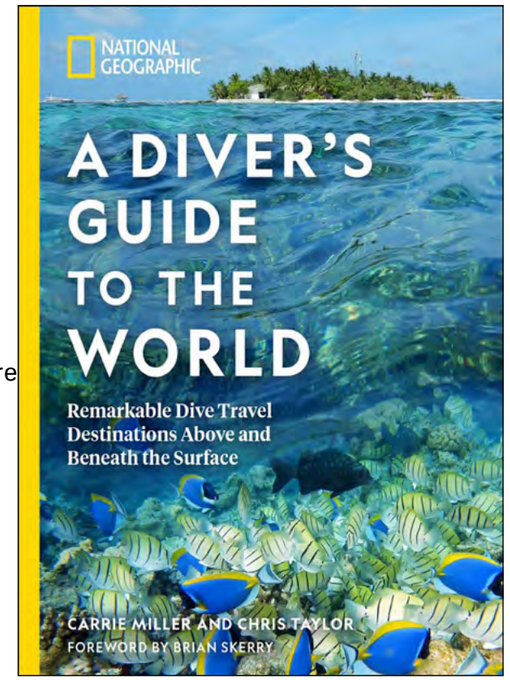
This is a book for those explorations—for ocean travelers. It's a different kind of guidebook, written for divers who like to travel, divers traveling with non-diving companions, and travelers with an interest in the underwater world.

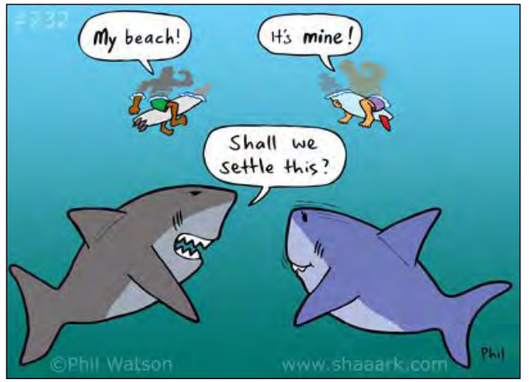
Each of the 50 locations is its own chapter – marvel at manta rays and dragons in Komodo; learn martial arts and go shore-diving in Okinawa; go on a tour of WWII history on land and underwater in the Solomon Islands; linger in the land and sea gardens of Bormes-les-Mimosas, France; and road-trip around the marine reserves and coastal towns of New Zealand's North Island.

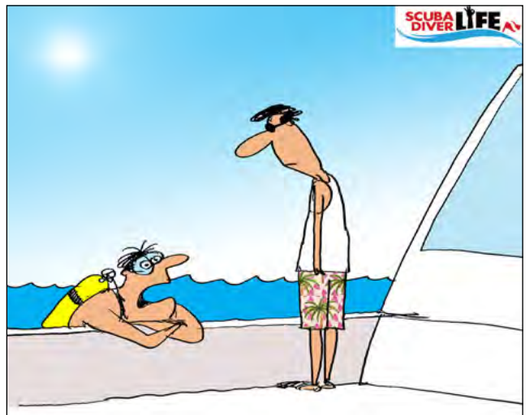
Each chapter contains compelling stories, stunning National Geographic photography, and expert advice, including travel tips, dive information, and activity suggestions, from remarkable shared experiences to solo excursions if divers and travelers choose to go their own ways for an afternoon.

Miller and Taylor believe in conservation through exploration, so each location also highlights a global issue such as the necessity of protecting remarkable ecosystems like coral reefs and mangroves, to sea turtle and shark conservation. They feature scientists and organizations that are striving to make a difference and suggest ways you can learn more and get involved.
Whether you're dreaming of your next dive holiday or looking to travel the world a little differently, this book will inspire you to get out and explore—above and beneath the surface!

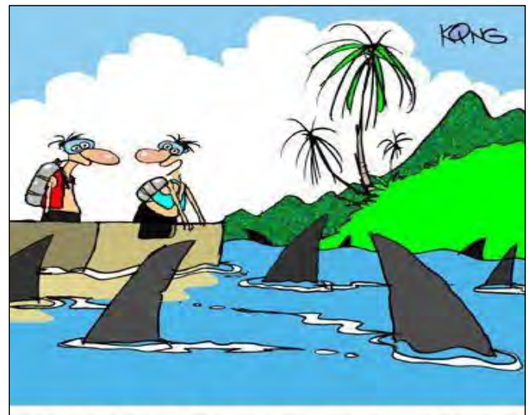
A DIVER'S GUIDE TO THE WORLD
By Carrie Miller and Chris Taylor (www.beneaththesurface.media)
Publisher: National Geographic Books
Release Date: December 6, 2022
The book is available from Amazon or https://books.disney.com







"That's it! I'm going on a diet. A manatee hit on me."



"Dude, I know I'm not the most experienced diver in the world, but my gut instinct tells me this is the perfect spot."
RAINBOW DIVERS - VIETNAM

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Western Australia

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Mandurah

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Adelaide

Diving Adelaide

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Web: www.divingadelaide.com.au

Underwater Explorer’s Club of SA

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Glengowrie

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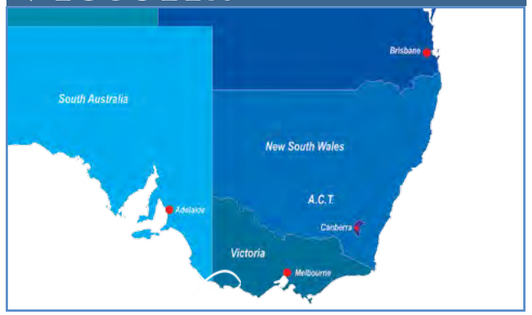
Victoria



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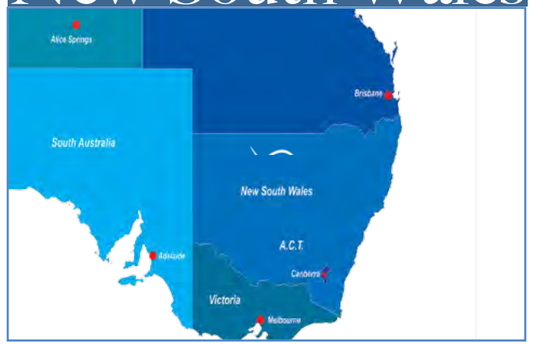

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